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Natural Gas Pricing: The Eternal Debate

Gary Allison

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Gary D. Allison*

I understand now what hell is. Hell is endless and eternal sessions of the natural gas conference.

James Schlesinger
Former Secretary,
United States Department
of Energy

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I. Introduction

The broad national consensus necessary to translate natural gas policy debates into major federal legislation has developed only twice in the nation's history. In 1938, the federal natural gas regulatory system was initiated through the enactment of the Natural Gas Act (NGA) to close a regulatory gap so that natural gas consumers could be protected from the monopoly powers of interstate pipelines.[1] Forty years later, substantial

*B.A., University of Tulsa, 1968; J.D., University of Tulsa College of Law, 1972; LL.M., Columbia University School of Law, 1976. Professor of Law, University of Tulsa College of Law. This article was developed during the course of a joint study of energy sectionalism conducted by the American Bar Association Coordinating Group on Energy Law and the National Energy Law & Policy Institute of the University of Tulsa College of Law. The author expresses his thanks to Sherman S. Poland, Esq., Sheila S. Hollis, Esq., James Mitchell, Esq., and Tom Johnson, Esq., for sharing with me their immense knowledge of the natural gas industry. I also wish to thank Cynthia Siegal, Mike Holdgrafer and Nancy Dodson for their tremendous research support.

[1]In 1927, the U.S. Supreme Court ruled that a sale of electricity produced by a company

changes in the nation's natural gas policies were enacted with the passage of the National Energy Act (NEA) in order to shepherd the industry through the turmoil of the 1970's energy crises. Although the NGA and the NEA were responses to very different stimuli, they had three factors in common which led to a broad legislative consensus:

(1) They both were enacted during times of economic upheaval which the electorate felt could not be overcome without significant changes in government-industry relationships;
(2) They both embodied natural gas policies which the electorate believed would stimulate greater consumer access to natural gas service; and
(3) They were regarded by producers either with indifference or as providers of the markets and resources necessary to support increased natural gas production.

Despite profound changes in the nation, the economy, and the natural gas industry, it took forty years before the consensus for legislative changes in the nation's natural gas policies re-emerged. Two factors were largely responsible for this delay. First, the original natural gas regulatory structure initially produced desirable results. Second, the Federal Power Commission (FPC) was reasonably adept in reducing pressures for change by stretching old policies to fit new problems.

The original structure of natural gas regulation under the NGA facilitated an expansion of the natural gas industry. Competition, not regulation, disciplined the wellhead market. Gas prices rose with gas demands, but not in real terms. Gas supplies were adequate in every area connected to the gas fields by a pipeline. While some pressures for initiating wellhead price regulation were developing in areas connected with gas service outside the producing states, the combined congressional power of net-producing states and of states convinced that their chances of getting gas service in the future depended upon producers receiving adequate incentives was enough to block any wellhead price control legislation.

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in one state and sold to a second company in another state for purposes of subsequent sales and distribution to end-users in states other than the state of origin constitutes a sale in interstate commerce which cannot be regulated by any state. Public Utilities Comm'n of Rhode Island v. Attleboro Steam & Electric Co., 273 U.S. 83, 89-90 (1927). This decision established a regulatory gap that could be closed only by federal regulation of such interstate sales.

The Federal Trade Commission issued a report in 1935 based on a comprehensive study of the natural gas industry in which it concluded that interstate natural gas pipelines then in existence enjoyed monopoly and monopsony powers that permitted them to charge excessive prices and receive unjustified transfers of income from producers and consumers. As a consequence, the FTC recommended that the sales of natural gas for resale in interstate commerce be regulated by the federal government. Report of the FTC to the U.S. Senate, S. Doc. No. 92, 70th Cong., 1st Sess. 589, 591, 593, 600, 601, 615-17 (1936). The Natural Gas Act of 1938, 15 U.S.C. §§ 717-17W (1976) was enacted to close the regulatory gap in the natural gas industry in order to prevent interstate pipelines from abusing their market positions to the detriment of consumers of natural gas sold in the interstate market.

The United States Supreme Court's decision in *Phillips Petroleum Co. v. Wisconsin*[2] brought about that which the political system would not: a federal wellhead price control system. Net-producing states quickly demonstrated their political clout by passing legislation to overturn the *Phillips* decision, only to have it vetoed by a sympathetic President out of his sensitivity to the possibility of scandal surrounding the passage of the deregulation bill.[3] After that veto, the number of net-producing states began to decline, while the areas receiving gas service increased. The ability to enact a congressional reversal of the *Phillips* case diminished dramatically, primarily because gas accessibility concerns had lessened due to the large backlog of proven gas reserves brought on-line by producers during the expansionary era.

Price became the central natural gas debate, a debate that sharply divided net-producing states from net-consuming states. The price debate became increasingly acute as a dual market formed out of producers' attempts to avoid the regulatory pitfalls of the interstate market. Although the FPC was never really able to develop a price control methodology that would permit a diverse and competitive natural gas production sector to perform well, its attempts succeeded in galvanizing the net consuming states' opposition to the removal of wellhead price controls.

The FPC's regulatory failures could not be hidden forever, as the gas shortages of the seventies demonstrated. The gas shortages revived supply accessibility concerns within the net-consuming states. The contrast between interstate gas shortages induced by regulatory failure and intrastate supply surpluses stimulated by free market pricing eventually renewed the net-consuming states' awareness of the connection between producer incentives and gas supply adequacy. The revival was aided by FPC flirtations with market oriented price ceilings and increased transportation flexibility as ways of securing additional dedications of natural gas to interstate commerce.[4] In fact, the FPC's pricing innovations and attempts to

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[2]Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954).

[3]S. BREYER & P. MACAVOY, ENERGY REGULATION BY THE FEDERAL POWER COMMISSION 58 (1974) [hereinafter cited as BREYER & MACAVOY].

[4]From the mid-1960's until its wellhead price setting functions were altered by the Natural Gas Policy Act of 1978, the Federal Power Commission (FPC) experimented with vintaged price ceilings and production incentive rates as means of stimulating dedications of greater volumes of gas to the interstate market. *See* Permian Basin Area Rate Cases, 390 U.S. 747, 784-87, 795-803 (1968); American Public Gas Ass'n v. Federal Power Comm'n, 567 F.2d 1016, 1030-31, 1063-64 (D.C. Cir. 1977), *cert. denied*, 435 U.S. 907 (1978); Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061 (5th Cir. 1975), *cert. denied* sub nom. California Co. v. Federal Power Commission, 426 U.S. 941 (1976). The Commission also permitted emergency sales above area and national ceiling prices, *see* R. PIERCE, G. ALLISON, & P. MARTIN, ECONOMIC REGULATION: ENERGY, TRANSPORTATION & UTILITIES 596 (1980), and initiated transportation programs to facilitate direct sales between interstate gas end-users and natural gas producers, *see* American Public Gas Ass'n v. Federal Energy Regulatory Comm'n, 587 F.2d 1089 (D.C. Cir. 1978) (affirming FPC Opin. Nos. 533, 533-A).

reintegrate the interstate and intrastate natural gas markets provided the framework for the natural gas policies embodied in the NEA.[5] The desire of consumers for gas supply security merged with producers' needs for greater production incentives to form the consensus necessary to enact the NEA's phased deregulation program.

The phased deregulation program of the NEA has ended, at least temporarily, the pressing supply concerns of the interstate market. A gas deliverability surplus has developed, a gas bubble that continues in existence, despite annual predictions that it soon will burst. At the same time, gas prices have increased to levels far above what the sponsors of the NEA had predicted.[6] The price increases even continued for awhile in the face of supply surpluses, a phenomenon that was counter to market theory. Consumers have been faced with burnertip prices above market-clearing levels and possibly above the levels they would have faced in a totally free wellhead market. Producers have been witnessing a contraction in natural gas markets as burnertip prices exceed consumers' costs of conservation or use of alternative fuels. As a consequence, producers have been facing declining demands at the wellhead and pressures to renegotiate their contracts to reduce wellhead prices and pipeline take-or-pay obligations. In the meantime, the Federal Energy Regulatory Commission (FERC) has been engaged in crisis management, resorting once again to free market pricing principles and increased transportation flexibility to diffuse yet another gas market controversy.

With consumers concerned more about high prices than with gas shortages, producers concerned about low prices and low wellhead demands, and the FERC engaged in reducing the pressures for significant policy

[5]The natural gas ceiling price provisions of title I of the Natural Gas Policy Act of 1978 reflect the FPC-FERC pattern of establishing multiple price ceilings with higher prices authorized on a vintaged basis for newer gas supplies than for older gas supplies. Compare price ceilings under NGPA §§ 102, 103, & 107, 15 U.S.C. §§ 3312, 3313, & 3317 (1976 and Supp. IV 1977-1981), with price ceilings authorized under NGPA §§ 104, 105, and 106, 15 U.S.C. §§ 3314-3316 (1976 and Supp. IV-1977-1981). The Commission's experiments with emergency sales authorities and direct sales with facilitating transportation authorities are reflected in the emergency and transportation authorities provided by title III of the NGPA. 15 U.S.C. §§ 3361-63, 3371, 3372, 3374 (1976 and Supp. IV 1977-1981).

[6]Gas prices at the burnertip have risen much faster than predicted because (1) world oil prices doubled unexpectedly shortly after the passage of the NGPA, D. YERGIN, CRISIS AND ADJUSTMENT: AN OVERVIEW, IN GLOBAL INSECURITY: A STRATEGY FOR ENERGY AND ECONOMIC RENEWAL 1, 3 (1982) [hereinafter cited as YERGIN CRISIS]; (2) the failure of the NGPA's market ordering provisions to prevent pipelines from making bids for deregulated high cost gas at prices above market clearing levels, Impact of the NGPA on Current and Projected Natural Gas Markets, 47 Fed. Reg. 19157, 19159 (1982) [hereinafter cited as NGPA Impacts]; (3) the ruling by the U.S. Supreme Court that pipeline production is eligible to receive NGPA ceiling prices, Public Service Comm'n of New York v. Mid-Louisiana Gas Co., 103 S. Ct. 3024 (1983), and (4) the ruling by the U.S. Court of Appeals for the 5th Circuit that the NGPA does not preclude area rate clauses from escalating interstate contract prices to maximum lawful prices under the Act, Pennzoil Co. v. Federal Energy Regulatory Comm'n, 645 F.2d 360 (5th Cir. 1981).

changes, it does not appear that any fundamental changes in the NEA's phased natural gas deregulation program are imminent. The interests of consumers and producers seem too divergent. The FERC's transportation, off-system sales, and special marketing programs, and the stability of world oil markets, seem to be bringing the natural gas markets into a workable short-term equilibrium. Finally, Congress does not seem to be eager to get embroiled in another bruising gas policy fight.

And yet, the basis is present for an intersectional consensus to adopt new competitive policies. The FERC's gas bubble management programs have demonstrated that gas markets can be expanded if gas burnertip and wellhead prices are competitive with the end-users' costs of using alternative fuels or achieving greater conservation. The FERC programs have also demonstrated that wellhead prices are more responsive to market-clearing prices at the burnertip when more direct sales links are established between the wellhead and burnertip. As a result, producing states and net-consuming states may rediscover their interdependence. If so, they may join efforts to enact the legislation needed to bring about thriving natural gas spot markets. Such legislation would, at a minimum, allow the NEA's phased deregulation to continue, establish a mechanism to release flowing gas supplies from their long-term contractual and regulatory dedications to specific markets and consumers, and encourage pipelines to develop a healthy contract carriage network.

In this article, the great gas sectionalism disputes arising from the energy crises of the 1970's are highlighted and contrasted with the expectations that provided the consensus for the passage of the NGA. Next, factors leading to the 1970's energy crises are chronicled to provide an understanding of why the NEA's natural gas policies were formed the way they were. The NEA's natural gas policies are then outlined and tied to the development of the gas bubble. Finally, problems created by the gas bubble are discussed in the context of current attempts by the public and private sectors to achieve short-term and long-term equilibria within natural gas markets.

II. The Great Shortage Debate

A. *The Overview*

Hysteria gripped the nation because of the proliferation of natural gas shortages during the 1970's. Within the interstate markets, two theories developed about future natural gas production. The Blackmail Theory held that the United States had plentiful supplies of low-cost natural gas which producers were withholding from the interstate markets in order to coerce Congress into decontrolling natural gas prices.[7] The Depletion

[7] *Long-Term Natural Gas Legislation, pt. 2: Hearings on H.R. 9159, H.R. 11047, Title II*

Theory held that the United States would soon run out of natural gas, regardless of the pricing strategy adopted.[8]

Proponents of both theories sponsored the same natural gas policy approach, which was to extend federal natural gas regulation into the intrastate market. The "blackmail" theorists felt this solution would convince withholding producers that they had nothing to gain by withholding gas supplies.[9] New gas supplies would come forth which the interstate market could acquire without engaging in bidding contests with companies in the intrastate market.[10]

For "depletion" theorists, the goal was to extend federal allocation programs to the intrastate markets so that the nation's dwindling gas supplies would be shared on the basis of need rather than on a willingness to pay.[11] Not only would this approach give the interstate market a greater share of the nation's gas supplies,[12] it also would prevent petroleum companies from receiving large scarcity rents.[13]

Producers, many economists of all persuasions, and the political delegations from producing states sponsored a free market approach to the natural gas shortages of the seventies. The free market proponents argued that the cause of the shortages was regulatory failure, not producer fraud or physical depletion.[14] Gas supplies were indeed sufficient to provide for domestic demands for years to come. The trick was to send appropriate price signals. New gas supplies were more expensive to develop than were historic supplies. Federal price ceilings were too low to cover these costs. Moreover, natural gas demands were too high because of artificially low prices. Deregulating new gas supplies would provide producers with ade-

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of H.R. 11265 and Title II of S. 2310 Before the Subcomm. on Energy and Power of the House Comm. on Interstate and Foreign Commerce, 94th Cong., 2d Sess. 1953-54, 1958 (1976) (statement of Sen. Metzenbaum of Ohio) [hereinafter cited as Natural Metzenbaum]. *See also* A. WILDAVSKY & E. TENENBAUM, THE POLITICS OF MISTRUST: ESTIMATING AMERICAN OIL AND GAS RESERVES 197-248 (1981) [hereinafter cited as GAS MISTRUST].

[8]The depletionists' main belief was that productive natural gas reserves are not plentiful enough to permit natural gas producers to respond expansively to large price increases. This view is best summed up by the words of John O'Leary, speaking in 1977 in his capacity as administrator of the Federal Energy Administration: "You have to ask yourself 'what do you get out of raising the price of natural gas' . . . every indication we have is that you get very little." I. BUPP & F. SCHULLER, NATURAL GAS: HOW TO SLICE A SHRINKING PIE, IN HARVARD BUSINESS SCHOOL ENERGY PROJECT, ENERGY FUTURE: REPORT OF THE ENERGY PROJECT AT THE HARVARD BUSINESS SCHOOL 56, 67 (1979) [hereinafter cited as GAS PIE]. Adding to the depletionists' rhetorical ammunition were studies conducted by Shell, Mobil, and Exxon stating that estimated gas reserves were sufficient to last only for 15-30 years. *Id. See also* GAS MISTRUST, *supra* note 7, at 206.

[9]*See* M. SANDERS, THE REGULATION OF NATURAL GAS 148 (1981) [hereinafter cited as SANDERS REGULATION].

[10]*Id.*

[11]*See* BREYER & MACAVOY, *supra* note 3, at 87.

[12]*Id.*, SANDERS REGULATION, *supra* note 9, at 149.

[13]*See* SANDERS REGULATION, *supra* note 9, at 148-49.

[14]*See* BREYER & MACAVOY, *supra* note 3, at 78-83.

quate production incentives and induce consumers to use energy more efficiently.[15] The expansion of domestic supplies and contraction of domestic demands would end the shortages and reduce the United States' dependence on foreign energy.[16]

A fierce battle erupted between the proponents of extended regulation and the proponents of deregulation. During the 1976 presidential election, candidate Carter had promised to deregulate new gas.[17] However, in his national energy plan, President Carter proposed extending regulation into the intrastate markets.[18] Using the power of his presidential honeymoon, President Carter's national energy plan passed the U.S. House of Representatives in August of 1977.[19]

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[15]*Id.*

[16]*Id.*

[17]As a candidate, President Carter wrote to then Governor David L. Boren of Oklahoma about what energy policies he would adopt if elected president. With respect to natural gas, candidate Carter wrote:

> First I will work with the Congress, as the Ford Administration has been unable to do, to deregulate new natural gas. The decontrol of producers' prices for new natural gas would provide an incentive for new exploration and would help our nation's oil and gas operators attract needed capital.
>
> Deregulation of new gas would encourage sales in the interstate market and help lessen the prospect of shortages in the non-producing states which rely on interstate supplies. While encouraging new production, this proposal will protect the consumer against sudden, sharp increases in the average price of natural gas.

Letter from Jimmy Carter to Governor David L. Boren (October 19, 1976), as reprinted in 124 CONG. REC. 29,659 (introduced into the record by Sen. Dewey F. Bartlett of Oklahoma).

[18]The Carter National Energy Plan proposed to extend a modified price regulation system to the intrastate market, as follows:

> The shift in the natural gas market from surpluses to shortages requires the abandonment of historic cost-based regulation and of the artificial distinction between interstate and intrastate markets.
>
> Therefore, a new commodity value pricing approach is proposed that applies to all new gas wherever it is used. It recognizes that prices should reflect the costs and the degree of risk associated with finding replacement supplies. This approach also recognizes the need to provide a sufficient incentive for the development of future supplies with substantially higher long-range development costs. By helping bring natural gas supply and demand back into balance, this pricing proposal would be a first step towrard deregulation. If the natural gas market could be brought into better balance by the mid-1980's, it might be possible and desirable to move further toward establishing full market pricing.
>
> Under this proposal all new gas sold anywhere in the country from new reservoirs would be subject to a price limitation at the Btu equivalent of the average refiner acquisition price (without tax) of all domestic crude oil. . . .
>
> The country would also move toward a single national market for gas, like that now existing for oil. For new production the interstate-intrastate distinction would be eliminated, together with the resulting distortion effect on both production and distribution. . . .

The Carter Administration National Energy Plan 52, *reprinted in* 207 ENERGY MGMT (CCH) pt. 3 (May 4, 1977).

[19]H.R. 8444, 95th Cong., 1st Sess., 123 CONG. REC. 27, 244 (1977). The Carter National Energy Plan passed virtually intact by a vote of 244 to 177 with 12 not votiong. *Id.*

In the Senate, it was a different story. There, the producing states and economic conservatives held a greater balance of power, and they used that power to pass a deregulation alternative to President Carter's natural gas program.[20] The two houses remained deadlocked on natural gas policy, and that deadlock held the entire Carter energy program captive until November 8, 1978, when a compromise natural gas policy passed, primarily in the form of the Natural Gas Policy Act of 1978 .[21]

B. *The Struggle for Supplies*

This legislative struggle was conducted simultaneously with a regulatory struggle concerning the production, pricing, and allocation of natural gas supplies. The FPC directed the regulatory struggle, desperately trying to stretch its NGA authorities into a regulatory pattern that could cure the interstate market's gas shortage problems while still depriving gas producers of excessive profits.

The gas shortage crises of the seventies were accentuated by the existence of intrastate deregulated wellhead gas markets. Gas which was produced, sold, and consumed solely within key producing states was subject neither to federal price controls under the NGA nor state price regulation under state regulatory legislation. Producers within these intrastate markets could choose between their deregulated home markets or the highly regulated interstate markets when they decided to whom to sell their gas supplies.

Wellhead gas sales of supplies destined for resale in interstate commerce had to receive approval from the FPC before they could be finalized.[22] During the early years of federal wellhead regulation, when the intrastate market did not generate large demands for gas, the FPC would not ap-

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[20]S. 2104, 95th Cong., 1st Sess., 123 CONG. REC. 32, 306 (1977).

[21]The National Energy Act, as passed, contained 5 separate acts: (1) Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117;
(2) Energy Tax Act of 1978, Pub. L. No. 95-618, 92 Stat. 3174;
(3) National Energy Conservation Policy Act, Pub. L. No. 95-619, 92 Stat. 3206;
(4) Powerplant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, 92 stat. 3289; and
(5) Natural Gas Policy Act of 1978, Pub. L. No. 95-621, 92 Stat. 3351.
Most of the National Energy Act's natural gas policies are contained in the Natural Gas Policy Act of 1978, the Powerplant and Industrial Fuel Use Act of 1978, and Title III of the Public Utility Regulatory Policies Act of 1978 (92 Stat. 3149-54). For a detailed discussion of the controversy surrounding the compromising of the House and Senate natural gas bills into the national policies contained in the National Energy Act, *see* SANDERS REGULATION, *supra* note 9, at 167-92.

[22]Section 7c of the Natural Gas Act of 1938, 15 U.S.C. § 717f(c)(1)(A) (1976) states in relevant part:

> No natural gas company or person which will be a natural-gas company . . . shall engage in the transportation or sale of natural gas, subject to the jurisdiction of the Commission, unless there is in force with respect to such natural-gas company a certificate of public convenience and necessity issued by the Commission authorizing such acts or operations: . . .

prove wellhead sales contracts unless they contained terms most beneficial to interstate consumers regarding price, volume, and duration of commitment. Initial sales prices were held to fairly low levels and were subject to later refunds if the next producer rate case generated still lower rate levels.[23] Wellhead rate determinations took years to finalize, leaving

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Section 7e of the Natural Gas Act of 1938 states in relevant part:

> [A] certificate shall be issued to any qualified applicant therefor, authorizing in whole or any part of the . . . sale . . . covered by the application if it found that the applicant is able and willing properly to do the acts and to perform the service proposed and to conform to the provisions of this chapter and the requirements, rules and regulations of the Commission thereunder, and that the proposed . . . sale . . ., to the extent authorized by the Commission, is or will be required by the present or future public convenience and necessity; otherwise such application shall be denied. . . .

"The Act prohibits such movements unless and until the Commission issues a certificate of public convenience and necessity therefor, § 7(c), 15 U.S.C. § 717 f(c). Section 7e vests in the Commission control over the conditions under which gas may be initially dedicated to the interstate use." Atlantic Ref. Co. v. Pub. Serv. Comm'n, 360 U.S. 378, 388-89 (1959) [hereinafter referred to as *CATCO*].

[23]The setting of natural gas wellhead rates under the Natural Gas Act was primarily a private matter between producers and purchasers. United Gas Co. v. Mobile Gas Corp., 350 U.S. 332, 341 (1956). However these initial rates were subject to review by the Commission to determine if they were just and reasonable under § 5 of the NGA, 15 U.S.C. § 717d. 350 U.S. at 341. Natural gas companies were permitted to change their rates, if rate changes were allowed under their contracts, subject to the Commission's authorities under § 4(e) of the NGA, 15 U.S.C. § 717c(e), to (1) suspend temporarily the rate pending a determination of the new rate's lawfulness and (2) to order a retroactive refund should the new rate go into effect after the suspension period but prior to a ruling on its lawfulness which subsequently finds the proposed rate too high. 350 U.S. at 341.

In CATCO, the U.S. Supreme Court held that § 7e of the NGA, 15 U.S.C. § 717f(e), permits the Commission to condition the sales of natural gas upon the establishment of a rate it feels is compatible to the public's convenience and necessity. 360 U.S. at 391. The Court found that such scrutiny of initial rates was necessary "to hold the line awaiting adjudication of a just and reasonable rate." *Id.* at 392. The Court was especially concerned that "if unconditioned certificates are issued where the rate is not clearly shown to be required by the public convenience and necessity, relief is limited to § 5 proceedings, and . . . full protection of the public interest is not afforded." *Id.*

In United Gas Improvement Co. v. Callery Properties, Inc., 382 U.S. 223 (1965), the Court approved of the Commission exercising its § 7(e) powers to: (1) condition the initial rate in a proposed natural gas sale to a price "in line" with those certificated by the Commission as just and reasonable under generally contemporaneous contracts governing gas sales from the same area; (2) set a ceiling price above which the producer could not charge for a period of time awaiting the outcome of a just and reasonable rate hearing governing rates on gas sold from the same area; and (3) order a refund of prices charged in excess of the initial "in line" rate pursuant to an early certificate of public convenience and necessity that was invalidated by the U.S. Supreme Court pending Commission review in light of the CATCO standards. *Id.* at 227-30. The Court also found it permissible for the Commission to set the initial rules by reference to contemporaneous contracts without receiving the mass of evidence it would receive in determining a just and reasonable rate. *Id.* at 227-28.

Later, the U.S. Supreme Court ruled that an initial price set "in a final, unconditioned permanent certificate is a lower limit below which a refund cannot be ordered . . . "even if that rate turns out to be above the just and reasonable rate ultimately established for the sale. Federal Power Commission v. Sunray DX Oil Co., 391 U.S. 9, 24 (1968). The Court also held that the Commission would as a condition for the issuance of a permanent certifi-

producers faced with relatively constant rates and years of uncertainty.[24]

(1) Clinging to Old Supplies

The FPC took the position, sustained by the United States Supreme Court in *Sunray Mid-Continent Oil Co. v. Federal Power Commission*,[25] that its abandonment authority was open-ended and could be used to hold gas supplies for the interstate market even though the sales contract to which the gas was subject had expired.[26] Such rulings turned wellhead commitments to interstate commerce into federal tarbabies, for once gas was committed to interstate markets, the producer could not divert it to other markets absent consent of the FPC.[27]

As the world energy markets became exceedingly volatile, causing gas wellhead market values to rise quickly, producers increasingly chose to sell their gas in intrastate markets in order to receive more flexible and advantageous pricing, volume, and duration terms. In the face of declining producer commitments to the interstate market, the FPC attempted to maximize the volume of gas supplies available within the interstate market by aggressively expanding its jurisdiction over previously unregulated supplies[28] and by clinging tenaciously to supplies previously

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cate require the applicants to refund amounts collected under outstanding, unconditioned temporary certificates in excess of the in line price it subsequently established. *Id.* at 13, 43-45.

[24]Indeed, it took the Commission from 1954, when it was ordered by the United States Supreme Court in Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954) to regulate producer rates, until the U.S. Supreme Court ruling in the Permian Basin Area Rate Cases, 390 U.S. 747 (1968) to establish an acceptable and workable methodology for establishing just and reasonable producer rates. *See also supra* note 23.

[25]364 U.S. 137 (1960).

[26]In *Sunray*, the producer requested a certificate with a duration term equal to the duration term in its sales contracts. *Id.* at 140. The Commission instead issued a certificate of unlimited duration. *Id.* The producer accepted the unlimited certificate subject to its right to contest or review the Commission's right to refuse to issue a limited certificate. *Id.* at 141. The U.S. Supreme Court sustained the Commission's power to issue certificates without time limitations. *Id.* at 141-56. The Court reaffirmed that under the Commission's abandonment authority, found in § 7b of the NGA, 15 U.S.C. § 717f(b) (1976), once a producer has commenced service to interstate commerce under a permanent certificate, it cannot abandon that service without the Commission's finding that the abandonment is consistent with the public's convenience and necessity. *Id.* at 156.

[27]*Supra* note 26. The U.S. Supreme Court later made the tarbaby even stickier by ruling that a certificate of indefinite duration bound gas supplies to the interstate market absent Commission permission to abandon despite the end of the certificate holder's rights to develop the gas supplies under a limited term mineral lease. California v. Southland Royalty Co., 436 U.S. 519, 525-27, 530-31 (1978).

[28]In California v. Lo Vaca, 379 U.S. 366 (1965), the United States Supreme Court ruled that restricted use provisions in gas purchase contracts, designed to dedicate the gas supplies purchased to non-jurisdictional direct uses rather than to jurisdictional resales, were ineffective in shielding the gas purchase arrangement from the FPC's regulatory jurisdiction where the gas involved traveled across state lines in a commingled stream with gas destined for resale. *Id.* at 369-70. The commingling or molecule theory was also applied in Louisiana Power & Light Co. v. Federal Power Comm'n, 483 F.2d 623, *reh'g denied*, 483 F.2d 1404 (5th Cir. 1973), *cert. denied*, 416 U.S. 974 (1974), wherein the court of appeals sustained

commited to interstate commerce.[29]

(2) Enticing New Commitments

The FPC also changed its ratemaking methodology drastically to encourage producers to dedicate newly discovered gas supplies to the interstate market. Under the FPC's company-by-company utility ratemaking method, the FPC became so overloaded with data that its rate cases took years to finalize.[30] As a consequence, producers faced years of uncertainty as to what prices they ultimately would be allowed to receive for their gas.

To end this regulatory paralysis, the FPC began setting rates first on the basis of area costs,[31] and finally on the basis of national costs.[32] The national ratemaking approach in particular permitted the FPC to make much more timely rate decisions.[33] To reduce further the producers' uncertainties about rates, the FPC adopted initial rate setting procedures that

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an FPC ruling that the injection into an intrastate pipeline of small amounts of gas that had been carried with gas destined for resale in interstate commerce was sufficient to convert the intrastate pipeline into an interstate facility subject to the FPC's regulatory jurisdiction. *Id.* at 631-32. The ruling emerged despite evidence tending to establish that all the gas carried by the intrastate pipeline was produced and consumed within the state of Louisiana. *Id.* at 628.

[29]*Supra* note 27. *See also* United Gas Pipeline Co. v. McCombs, 442 U.S. 529 (1979), wherein the Supreme Court sustained an FPC ruling that, under a contract committing all producible reservoirs from a leasehold, the fact that production ceased from all known reserves under the leasehold for a period of years did not release subsequently discovered reserves under the leasehold since the FPC had not been asked for permission to abandon delivery of gas from the leasehold. *Id.* at 538-39.

[30]*Supra* note 24. Permian Basin Area Rate Cases, 390 U.S. 747, 755-58 (1968).

[31]The Permian Basin Area Rate Cases, *supra* note 30, represented the first judicial acquiescence of the FPC's decision to calculate just and reasonable rates on an area average cost basis instead of a company by company basis.

[32]The national rate approach was first adopted in Just and Reasonable National Rates for Sales of Natural Gas, 51 F.P.C. 2212 (1974). In adopting a national rate approach, the Commission also changed its rate making procedure from an adjudicatory hearing process to a notice and comment rulemaking process. *Id.* at 2218-24. The Commission's national ratemaking methodology was approved judicially in Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061 (5th Cir. 1975), *cert. denied sub nom.* California Co. v. Federal Power Comm'n, 426 U.S. 941 (1976). The Commission issued its second national rate opinion in National Rates for Jurisdictional Sales of Natural Gas, 56 F.P.C. 509 (1976), *aff'd*, American Public Gas Ass'n v. Federal Power Comm'n, 567 F.2d 1016 (D.C. Cir.), *cert. denied*, 435 U.S. 907 (1977).

[33]Assuring timely regulatory responses to changing natural gas market conditions was the Commission's primary goal in adopting its national rate rulemaking procedure, as evidenced by its statement that:

> [W]e have determined that a single uniform national rate promulgated in this rulemaking proceeding will enable us to establish just and reasonable rates for natural gas sold in interstate commerce without the inherent delays and stale records which have accompanied the traditional adjudicatory method of regulating producer rates. The prescription of a uniform national rate for all areas will avoid essentially duplicative procedures and evidence to prescribe just and reasonable rates for the various natural gas producing areas of the Nation, and will enable

(1) allowed producers to receive initial rates in excess of the latest applicable area or national rate; (2) gave producers a decision as to whether their initial rates were just and reasonable at the same time the producers were granted a certificate authorizing their interstate gas rates; and (3) eliminated the refunding requirement so that producers would not face any refund liability should the next applicable area or national rate case establish a rate governing their gas sales that was lower than their initial rates.[34]

Early FPC natural gas rate decisions focused on producers' historic average costs of recent production.[35] This historic average cost approach discouraged production because the natural gas industry is an increasing cost industry with marginal production costs being greater than historic average costs.[36] To encourage new exploration and production activity, the FPC began focusing on producers' opportunity costs of developing new supplies in setting natural gas rates.[37] This new focus led to the practice

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> the Commission to utilize its manpower and resources for more effective administration of the Natural Gas Act. By the use of the Commission's rate-makig powers in this and future proceedings, we and future Commissions will be able to prescribe just and reasonable rates on a biennial basis using the most recent evidence and bringing expertise gained in related proceedings to bear upon this problem of assuring an adequate supply of natural gas for the Nation.

51 F.P.C. 2218 (1974).

[34]This so-called optional procedure was first adopted by the Commission in its Order No. 455, Optional Procedure for Certificating New Producer Sales of Natural Gas, 48 F.P.C. 218, 232-35 (1972), *aff'd sub nom.* Moss v. Federal Power Comm'n, 502 F.2d 461 (D.C. Cir. 1974), *cert. denied*, 422 U.S. 1020 (1975). Producers exercising the optional procedure received greater rate certainty, but at the cost of future rate flexibility, since under the optional procedure:

> No contract [would] be accepted for filing if it include(d) any type of indefinite pricing clause . . . (including) "area rate or FPC clauses," a "price redetermination clause or renegotiation clause" or a "special escalation clause."

Id. at 234. Moreover:

> By acceptance of a certificate issued hereunder, the seller-applicant unconditionally agree(d) to (1) waive all rights to seek future rate increases under Section 4 of the Natural Gas Act with respect to the contract submitted, other than price escalations, if any, as certified by the Commission; and (2) waive all rights to contingent adjustment of flowing gas rates as provided by the Commission in area rate decisions heretofore decided, for flowing gas which the seller-applicant produces in the same geographical pricing area as the pricing area of the production covered by the application made under this Section.

Id. Often this rate inflexibility left the producer worse off under the optional procedure than it would have been had it certified its sales under the applicable area or national rate. *See* Texas Gas Exploration Corp., 52 F.P.C. 767 (1974), *reh'g denied*, 52 F.P.C. 1312 (1974).

[35]Permian Basin Area Rate Cases, 390 U.S. 747, 818-821 (1968).

[36]*See* BREYER & MACAVOY, *supra* note 3, at 70-71.

[37]Thus, in its first national rate case, the Commission made some projections as to future costs rather than relying entirely on historic accounting costs, and further adopted a rate of return figure high enough "to put some noncost factors into the rate to make the interstate market more competitive with other markets." Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061, 1066-69 (5th Cir. 1975), *cert. denied sub nom.*, California Co. v. Federal Power

of vintaging, as the FPC granted ever higher rates for recently discovered gas supplies while keeping rates at lower levels for previously discovered gas supplies.[38] The FPC also liberalized its price escalation rules. Upon adopting its area ratemaking method, the FPC decided that producers should be able to escalate the prices paid for gas sold under existing contracts to the level established by the latest applicable area rate case, since area rates were established on the basis of gas production costs.[39]

Finally, the FPC adopted more flexible policies toward the duration of producer commitments to the interstate market. Producers and intrastate pipelines were authorized to make short-term sales to interstate pipelines during emergencies without being subjected to the regulatory authority of the FPC.[40] The FPC also adopted procedures allowing producers to receive pregranted abandonments of their interstate commitments at the same time they received certificates approving their interstate gas sales.[41]

Comm'n, 426 U.S. 941 (1976). In the second national rate case, the Commission set a rate of $1.42 per Mcf for new gas, up from the 52¢ per Mcf rate established for new gas in the first national rate case. American Public Gas Ass'n v. Federal Power Comm'n, 576 F.2d 1016, 1025-29 (D.C. Cir.), *cert. denied*, 435 U.S. 907 (1977).

[38]"The Commission reasoned that a higher maximum rate for gas-well gas dedicated to interstate commerce after the approximate moment at which a separate search [between oil and gas] became widely possible would provide an effective incentive. Correspondingly, the Commission adopted a relatively low price for all other natural gas produced in the Permian Basin, since price could not serve as an incentive, and since any price above average historical costs, plus an appropriate return, would merely confer windfalls." Permian Basin Area Rate Cases, 390 U.S. 747, 797 (1968). In its first national rate case, the Commission moved away from vintaging and began permitting producers of old gas to collect the higher new gas rate upon the expiration of their old contracts and the establishment of new contracts—because the Commission (1) "found . . . that a massive commitment of new funds is necessary to alleviate the natural gas shortage and that internally generated sums are a necessary source of such funds," and (2) "noted that by phasing out the vintaging practice. . . , all consumers would more equitably bear the burden of financing added exploration." Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061, 1077 (5th Cir. 1975), *cert. denied sub nom.* California Co. v. Federal Power Comm'n, 426 U.S. 941 (1976). However, the Commission returned to its vintaging practices in its second national rate case because the magnitude of its increase in the price of new gas, "the dramatic increase in costs and decrease in productivity" led it to conclude that it must return to vintaging "to preclude exaction of excessive and unjustifiable economic rent from flowing gas." American Public Gas Ass'n v. Federal Power Comm'n, 567 F.2d 1016, 1033 (D.C. Cir.), *cert. denied*, 435 U.S. 907 (1977).

[39]Area rate clauses were authorized by the F.P.C. in its Order No. 329, Permissible Provisions for Price Changes in Independent Producer Rule Schedules—Liberalization, 36 F.P.C. 925 (1966). *See* Pennzoil Co. v. Federal Energy Regulatory Comm'n, 645 F.2d 360, 366 (5th Cir. 1981).

[40]Policy with Respect to Establishment of Measures to be Taken for the Protection of as Reliable and Adequate Service as Present Natural Gas Supplies and Capacities Will Permit, Order No. 431, 45 F.P.C. 570 (1971), *as amended*, Order No. 431-A, 48 F.P.C. 193 (1972), Just and Reasonable National Rates for Sales of Natural Gas, 52 F.P.C. 700 (1974); Immediate Institution of Temporary Service by Independent Producers, Order No. 193, 21 Fed. Reg. 9166, 9167 (1956), *as amended*, Order No. 418, 44 F.P.C. 1574, 1576 (1970), Just and Reasonable National Rates for Sales of Natural Gas, 52 F.P.C. 700 (1974).

[41]Pregranted certificates of abandonment were approved in concept as a part of the Commission's Optional Precedure for Certificating New Producer Sales of Natural Gas, Order

(3) Allocating Shortages

The FPC's regulatory manipulations could not prevent natural gas shortages within the interstate markets. Interstate natural gas demands, stimulated by average cost pricing and the nation's emerging environmentalism, increased significantly each year from the 1950's to the mid-1970's.[42] New natural gas reserve additions, as well as new dedications of natural gas to the interstate markets, declined as a result of regulatory disincentives.[43] Congressional vacillation on the issue of wellhead price regulation also discouraged producers, especially when Congress veered toward extending wellhead pricing regulation into the intrastate markets.[44] By 1971, interstate gas shortages became so severe that the FPC ordered interstate pipelines to submit curtailment plans for its approval.[45] In reviewing the pipeline's curtailment proposals, the FPC established curtailment guidelines favoring curtailment by end-use priorities rather than by pro rata adjustments.[46]

The FPC's curtailment priorities were premised on the FPC's determination that some end-uses were more efficient or essential than others.[47]

No. 455, 48 F.P.C. 218, 233 (1972), *rev'd sub. nom.* Moss v. Federal Power Comm'n, 502 F.2d 461, 471-72 (D.C. Cir. 1974), *rev'd sub nom.* Federal Power Comm'n v. Moss, 424 U.S. 494 (1976). Pregranted abandonments were also adopted to encourage emergency and short-term sales of gas to the interstate market. Policy with Respect to Establishment of Measures to be Taken for the Protection of as Reliable and Adequate Service as Present Natural Gas Supplies and Capacities Will Permit, Order No. 431, 45 F.P.C. 570 (1971), *as amended*, Order No. 431-A, 48 FPC 193 (1972).

[42]Uniform National Rates for Sales of Natural Gas Produced from Wells Commenced On Or After January 1, 1973, and New Dedications of Natural Gas to Interstate Commerce On Or After January 1, 1973, Just and Reasonable National Rates for Sales of Natural Gas, 51 F.P.C. 2212 (1974).

[43]*See* American Public Gas Ass'n v. Federal Energy Regulatory Comm'n, 587 F.2d 1089, 1095n.5 (D.C. Cir. 1978). *See also* SANDERS REGULATION, *supra* note 9, at 126 (Table 14), showing that from 1956 to 1973, natural gas production rose from 10.9 TCF to 22.6 TCF, while reserve additions fell from 24.7 TCF to 6.8 TCF and the reserves/production ratio fell from 21.8 to 11.1.

[44]*See* SANDERS REGULATION, *supra* note 9, at 153-64.

[45]Policy with Respect to Establishment of Measures to be Taken for the Protection of as Reliable and Adequate Service As Present Natural Gas Supplies and Capacities Will Permit, Order No. 431, 45 F.P.C. 570 (1971).

[46]Utilization and Conservation of Natural Resources, Order No. 467, 49 F.P.C. 85 (1973).

[47] We are impelled to direct curtailment on the basis of end use rather than on the basis of contract simply because contracts do not necessarily serve the public interest requirement of efficient allocation of this wasting resource. . . .

[W]e have determined that interruptible sales are for the most part, predicated on end-use considerations; those customers, be they direct sales or indirect sales, who require gas for human needs service or non-substitutable industrial service do not contract on an interruptible basis . . . . [I]nterruptible customers can most reasonably be expected to have alternative fuel facilities already operational. We conclude, therefore, that curtailment should first fall on [interruptible customers] . . . particularly since these customers are best prepared to accept interruptions in service and clearly do not require uninterrupted service for protection of life or property.

Residential and commercial uses were preferred over industrial uses, industrial users incapable of using alternative fuels were given preference over industrial users with alternative fuel capability, firm industrial customers were favored over interruptible industrial customers, and within each priority, small users were favored over large users.[48] Lower priority uses had to be curtailed entirely before higher end-uses could be affected.

In general, the end-uses accorded the lowest priority levels coincided with those which had generated the greatest demands for coal prior to the expansion of the natural gas industry.[49] This was especially true for

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> Finally, if curtailment reaches beyond the level of interruptible service into firm contract service, we commit ourselves to the proposition that large volume boiler fuel usage is *inferior* (emphasis added) and should be curtailed before other firm service. Aside from the established physical fact that combustion of natural gas for raising steam in boilers and its subsequent conversion into electricity or mechanical energy results in a loss of roughly two-thirds of the heating value of the gas used—which we regard as unacceptably inefficient in times of shortage—we note also that those who use gas as boiler fuel generally can substitute other fuels more readily, and at lower overall cost than other gas users; additionally, pollution control is more practical because of the large size of individual installations . . . . [S]ubordinating boiler fuel use with its comparative ease of substitutability, to other large scale industrial and commercial uses should tend to minimize plant and business closings and the attendant economic loss from decreased production and payrolls, and the personal hardships of unemployment.

Arkansas Louisiana Gas Co., Opin. No. 643, 49 F.P.C. 53, 66-67 (1973).

[48]The curtailment priorities established by the Commission were stated as a general policy and interpretation, 18 C.F.R. § 2.78(a)(1)(1984), and were as follows:

(i) Residential, small commercial (less than 50 Mcf on a peak day).
(ii) Large commercial requirements (50 Mcf or more on a peak day), firm industrial requirements for plant protection, feedstock and process needs, and pipeline customer storage injection requirements.
(iii) All industrial requirements not specified in paragraph (a)(1)(ii), (iv), (v), (vi) (vii), (viii) or (ix) of this section.
(iv) Firm industrial requirements for boiler fuel use at less than 3000 Mcf per day, but more than 1500 Mcf per day, where alternate fuel capabilities can meet such requirements.
(v) Firm industrial requirements for large volume (3000 Mcf or more per day) boiler fuel use where alternate fuel capabilities can meet such requirements.
(vi) Interruptible requirements of more than 300 Mcf per day, but less than 1,500 Mcf per day, where alternate fuel capabilities can meet such requirements.
(vii) Interruptible requirements of intermediate volumes (from 1,500 Mcf per day through 3,000 Mcf per day), where alternate fuel capabilities can meet such requirements.
(viii) Interruptible requirements of more than 3,000 Mcf per day, but less than 10,000 Mcf per day, where alternative fuel capabilities can meet such requirements.
(ix) Interruptible requirements of more than 10,000 Mcf per day, where alternate fuel capabilities can meet such requirements.

Utilization and Conservation of Natural Resources—Natural Gas Act. Order No. 467-B, 49 F.P.C. 583 (1973).

[49]As a consequence, legislation mandating coal conversion has been very popular with

large industrial boiler fuel users and electric power generators. As the gas shortage crises worsened, consuming areas with large residential loads and relatively small boiler fuel and power plant loads joined with the major coal producing areas in proposing legislation that would prohibit industrial boiler fuel users and electric power generators from using natural gas.[50]

(4) Acquiring Supplementals

Curtailment plans forced pipelines and their customers to make the difficult choice of keeping their homes warm or keeping their places of work open. To make this choice more manageable, the FPC began encouraging pipelines, distribution companies, and the higher priority curtailed industrial users to acquire supplemental gas supplies. The supplementals came in four major categories: (1) intrastate gas acquired through the FPC's emergency sales and direct sales programs, (2) natural gas imports, (3) liquified natural gas (LNG) (which was largely imported), and (4) synthetic natural gas (SNG).

Supplemental gas supplies were much more costly to acquire than available interstate natural gas supplies. Intrastate and foreign sources of gas would not sell their gas to the interstate markets without receiving wellhead prices in excess of both the FPC's wellhead ceiling prices and the current deregulated intrastate prices.[51] Costly specialized facilities had to be built before LNG and SNG could be used.[52] SNG production could not occur without taxpayer subsidization of expensive and lengthy research and development projects.[53] Great uncertainty costs are inherent in the use of SNG because its production and consumption feasibility, technical

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coal producing states as a means of regaining their "lost" markets, and has played an important role in securing legislative support from coal producing states for various natural gas policy approaches. *See* SANDERS REGULATION *supra* note 9, at 121-123, 135, 139-140, 154-55, 158, 162-63, 165-66, 170-71, 189-192.

[50]Such legislation was passed in the form of the Energy Supply and Environmental Coordination Act of 1974, Pub. L. No. 93-319, 88 Stat. 246, and the Powerplant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, 92 Stat. 3289.

[51]*See* New Policy Guidelines and Delegation Orders from Secretary of Energy to Economic Regulatory Administration and Federal Energy Regulatory Administration, 49 Fed. Reg. 6684, 6684-86 (1984); United Gas Pipe Line Co. v. Federal Energy Regulatory Comm'n, 649 F.2d 1110, 1112-13 (5th Cir. 1981).

[52]Under an agreement between Algeria's national energy company, Sontrach, and El Paso Algeria Company, for the importation of liquified natural gas (LNG), terminal storage and vaporization facilities had to be constructed in the U.S. at a cost of over $600 million, LNG tankers had to be purchased at a cost of $1.6 billion, and a liquification plant had to be built in Algeria at a cost of $2.2 billion. West Virginia Pub. Services Comm'n v. United States Dept. of Energy, 681 F.2d 847 (D.C. Cir. 1982). The Great Plains Coal gasification project was estimated in 1980 to cost up to $1.5 billion. Office of Consumers' Counsel v. Federal Energy Regulatory Comm'n., 655 F.2d 1132, 1135 & n.4 (D.C. Cir. 1980).

[53]In recognition of this fact, Congress, through the Energy Security Act of 1980, Pub. L. No. 96-294, 94 Stat. 611, established the United States Synthetic Fuels Corporation which was authorized to develop a multi-billion dollar synthetic fuel production strategy.

and economical, remain in question.[54]

To help insulate residential customers from the high costs of supplementals, the FPC adopted incremental pricing policies. These imposed the bulk of the costs of acquiring supplementals on the lower priority industrial users.[55] The FPC also attempted to subject incrementally-priced supplemental contracts to its curtailment priorities. However, it was forced to back away from this plan because purchasers of supplementals were unwilling to pay incremental rates without receiving exemptions from the FPC's curtailment programs.[56]

(5) Allocation Sectionalism

Uneven patterns of gas shortages and gas consumption cost increases emerged across the nation because the FPC's curtailment and supplementals

[54]*See* Office of Consumers' Counsel v. Federal Energy Regulatory Comm'n, 655 F.2d 1132 (D.C. Cir. 1980) (holding that the FERC lacked jurisdiction over coal gasification projects for purposes of arranging ratepayer guarantees of the capital costs of the project even if the project proved to be unsuccessful). Note also that in 1982 more than 800,000 bldoe in coal gasification went from "design engineering or planning status into cancellation or deferral. Ninety percent of all projects finally planned were cancelled or delayed indefinitely." Slow Growth Seen for Synthetic Fuels, 81 Oil & Gas J. 80, 83 (May 2, 1983).

[55]In United Gas Pipe Line Co. v. Federal Energy Regulatory Comm'n, 649 F.2d 1110 (5th Cir. 1981), the court upheld a FERC ruling that imposed the higher cost burdens of gas purchased by the pipeline under emergency purchase authorities on low priority customers. Earlier attempts at incremental pricing were less successful. The Fifth Circuit, in Columbia LNG Corp. v. Federal Power Comm'n, 491 F.2d 651 (5th Cir. 1974), overturned the Commission's adoption of incremental pricing of LNG imports on grounds that the record reflected insufficient evidence to justify the Commission's departure from rolled in pricing. *Id.* at 654-55. The Commission, in a notice entitled End Use Rate Schedules, 40 Fed. Reg. 8571 (1975), proposed apportioning the full cost of "new" gas and supplementals on industrial users. This proposal was still pending when the NGPA, and its incremental pricing provisions, was enacted. Meanwhile, in 1977 the Commission marched up the incremental pricing hill and back down again by first imposing incremental pricing on the sales of imported LNG, Trunkline LNG Co., 58 F.P.C. 726, 741-42 (1977), and then reverting to rolled-in pricing because LNG was projected to be a high percentage of the pipeline's base load supplies in the future and because with incremental pricing the firm demands needed to guarantee the financial integrity of the project would not materialize. Trunkline LNG Co., 58 F.P.C. 2935, 2937-41 (1977).

[56]With respect to authorizing the Columbia LNG Corp. imported LNG project, the FPC first stated that:

> We reject the concept of rolling in relatively expensive supplemental gas supply costs with a pipeline's unit cost of gas supply. To do so would disguise the economic cost of this LNG which we find is contrary to the public interest. We, therefore, will require the filing by the purchasing jurisdictional pipelines of separate LNG rate schedules, which reflect incremental costing concepts . . . As a matter of policy, regasified LNG volumes should be included in the system-wide volumes available during periods of curtailment due to an insufficient supply of gas to meet the respective pipelines' obligations under curtailment plans filed pursuant to our orders. On the other hand, system-wide volumes should not be used to meet unfulfilled contractual obligations for regasified LNG occasioned by a non-delivery at the requisite [LNG] volumes.

Columbia LNG Corp., 47 F.P.C. 1624, 1639-40 (1972). Later, the FPC backed down on its

policies were superimposed on a national market segmented into regulated and unregulated parts, and, within the interstate market, on a wide variety of interstate pipeline gas inventory levels and load profiles.[57] The variances among interstate pipeline inventory levels and load profiles reflected differences in the abilities of interstate pipelines to match long-term gas demands and supplies through effective gas acquisition and load management programs.[58]

The imbalances in gas supply fortunes among consuming sectors and sections produced conflicts among industrial, commercial and residential consumers, among different service areas within each interstate pipeline system, between intrastate and interstate consumers, and among consumers of different interstate pipeline systems. Industrial consumers and service areas with large industrial loads experienced the greatest curtailments and cost increases during the gas shortage crises.[59] Therefore, they were inclined to (1) support pro rata curtailment policies over end-use curtailment plans;[60] (2) favor supplemental policies with the most liberal criteria for specifying what supplementals were eligible for acquisitions and which consumers were eligible to acquire them;[61] (3) oppose incremental

curtailment decision, and held that LNG supplementals sold under full costed incremental rates "should be contracted for on a firm basis, not subject to curtailment." Columbia LNG Corp., Opin. No. 622-A, 48 FPC 723, 728 (Oct. 5, 1972). Note the incremental pricing approach of Opinions 622 & 622-A was reversed in Columbia LNG Corp. v. Federal Power Comm'n, 491 F.2d 651 (5th Cir. 1974).

[57]*See* Consolidated Edison Co. of New York, Inc. v. Federal Energy Regulatory Comm'n, 676 F.2d 763, 769 (D.C. Cir. 1982).

[58]For an especially revealing critique of how gas producers, interstate pipeline companies, and the Federal Power Commission interacted in the 1960's to permit expansions of pipeline customers and service areas without carefully assessing future gas supply and demand balances, *see* J. GAULT, PUBLIC UTILITY REGULATION OF AN EXHAUSTIBLE RESOURCE: THE CASE OF NATURAL GAS 195-250 (1979). The author suggests that the main reason pipelines encountered shortages was the misreading or misuse of statistics indicating that demands were growing in the wake of declining reserves/production ratios by the pipelines and the Commission. *Id.* According to Gault, the FPC failed to assess properly the impending shortages "partly because it felt that it had the task of promoting natural gas usage, partly because of a desire to preserve the regulatory coalition, and partly because it failed to look seriously at future gas demand." *Id.* at 195, 209-37. The pipelines, which had as good, if not better, access to the information suggesting future shortages failed to act appropriately possibly because "evidence of declining reserves would have scared away potential investors," and probably because the pipelines' debt instruments called for accelerated retirement if reserves fell below a certain level. *Id.* at 237-50.

[59]*See* Consolidated Edison Co. of New York, Inc. v. Federal Energy Regulatory Comm'n, 676 F.2d 763, 766-69 (D.C. Cir. 1982).

[60]*See* Transcontinental Gas Pipe Line Corp., Opin. No. 778, 56 F.P.C. 2134, 2143-47 (1976), *rev'd sub nom.* North Carolina v. Federal Energy Regulatory Comm'n, 584 F.2d 1003 (D.C. Cir. 1978).

[61]*See* Policy with Respect to Certification of Pipeline Transportation Agreements, Order No. 533, 54 F.P.C. 821, 833, 835-38 (1975), *aff'd sub nom.* American Public Gas Ass'n v. Federal Energy Regulatory Comm'n, 587 F.2d 1089 (D.C. Cir. 1978), wherein the Commission, over consumer and some interstate pipeline protests, established a transportation certification program encouraging high priority industrial and commericial customers to enter into direct sales relationships with producers for supplemental natural gas supplies.

pricing of supplementals;[62] (4) demand compensation for the losses inflicted on them by the pipelines' failure to honor their gas sales contracts as a result of either poor management or the implementation of curtailment;[63] and (5) advocate load growth prohibitions so that the demands of high priority users would not expand to the point where lower priority users would face curtailment.[64] Conversely, residential and commercial consumers enjoyed the highest priorities under the FPC's end-use curtailment policies and consequently supported end-use curtailment,[65] opposed liberal supplemental policies as practices that would increase the prices and reduce the availability of intrastate gas supplies,[66] supported the FPC's incremental pricing of supplementals,[67] opposed compensating those most grievously affected by curtailment, since such compensation could possibly increase the costs or decrease the reliability of the gas service they received,[68] and were skeptical about load growth limitations.[69]

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[62]PIERCE, AN OVERVIEW OF REGULATION, IN NATURAL GAS REGULATION HANDBOOK 30, 91 (R. Pierce ed. 1980).

[63]*See* Consolidated Edison Co. of New York v. Federal Energy Regulatory Comm'n, 676 F.2d 763, 769 (D.C. Cir. 1982) (rate compensation); International Paper Co. v. Federal Power Comm'n, 476 F.2d 121, 125-129 (5th Cir. 1973) (contract damages); Monsanto v. Federal Power Comm'n, 463 F.2d 799, 808 (D.C. Cir. 1972) (contract damages).

[64]*See* Cities Service Gas Co., Opin. 805, 58 F.P.C. 2519, 2528-37 (1977), explained, 59 F.P.C. 1373 (1977).

[65]*See* Transcontinental Gas Pipe Line Co., Opin. No. 778, 56 F.P.C. 2134, 2144-45, 2167-68, (1976), *remanded for further proceedings*, North Carolina v. Federal Energy Regulatory Comm'n, 584 F.2d 1003 (D.C. Cir. 1978).

[66]For example, the American Public Gas Association and the Consumers Federation of America challenged the Federal Power Commission's Order No. 533, 54 F.P.C. 821 (1975), *aff'd sub nom.* American Public Gas Ass'n v. Federal Energy Regulatory Comm'n, 587 F.2d 1089 (D.C. Cir. 1978), which permitted high priority industrial customers facing curtailment to get transportation services for any natural gas purchases they arranged directly with intrastate producers on grounds that

> it would violate the Natural Gas Act by permitting unregulated prices for sales that are required to be regulated; would unfairly favor the very largest industrial consumers, who can afford to purchase gas directly from a producer at unregulated, intrastate prices; and would operate to establish a new competitor for onshore gas, unrestrained as to the price it can pay, thus handicapping all interstate pipelines in their attempts to procure supplies of onshore gas.

587 F.2d at 1093-94.

[67]*See* United Gas Pipeline v. Federal Energy Regulatory Comm'n, 649 F.2d 1110, 1112-14 (5th Cir. 1981) (Commission order prohibiting the rolled-in pricing of emergency gas purchases on grounds that to do so discriminated against high priority customers). *See also* Trunkline LNG Co., Opin. No. 796-A, 58 F.P.C. 2935, 2937, 2939 (1977) (noting that only the Environmental Defense Fund, the Consumer Federation of America and the Public Interest Economics Center supported the Commission Staff's defense of incremental pricing).

[68]*See* Consolidated Edison Co. of New York v. Federal Energy Regulatory Comm'n, 676 F.2d 763 (D.C. Cir. 1982) (sustaining the Commission's refusal to require an interstate pipeline to provide a compensation system to customers curtailed more than the system average); *but see* North Carolina v. Federal Energy Regulatory Comm'n, 584 F.2d 1003 (D.C. Cir. 1978) (wherein the court acknowledges that high priority customers of the deepest curtailed distribution companies must pay more than high priority customers of lightly curtailed

By contrast with the interstate markets, intrastate markets generally enjoyed gas supplies adequate to meet their growing demands throughout the gas shortage crises of the 1970's. This contrast lead to the spectre of high priority residential consumers facing curtailment in the interstate market, while in the intrastate markets the lowest priority industrial and power plant users expanded their demands without difficulty.[70] To protect their supply advantages, intrastate consumers joined with their producing sectors in opposing the efforts of interstate consumers to extend federal natural gas price and allocation regulation into the unregulated intrastate markets[71] and to enact legislation prohibiting low priority industrial and power

distribution companies). *See also* International Paper Co. v. Federal Power Comm'n, 476 F.2d 121, 132 (5th Cir. 1973) (court suggests that an award of contract damages to curtailed industrial customers would frustrate "the orderly control by the F.P.C. if the damages could be paid out of current revenues contributed by ratepayers at rates necessarily increased to care for this exponential liability").

[69]*See* Cities Service Gas Co., Opin. No. 805, 58 F.P.C. 2519, 2532-34 (1977). In Cities, representatives of communities composed largely of high priority residential and commercial customers objected to a load growth moratorium facilitated by a fixed base period volume on grounds that:

> A moratorium or load growth will only continue further into the future Cities current service to low priority boiler fuel customers. This will be accompanied by a requirement that virtually all new homes and small commercial establishments in the Cities area use electricity as a source of heat. Abbeyville, et. al., alleges that new home construction and small commercial growth may come to a halt because the cost of electric heat is prohibitive and residents of these towns and cities will not purchase houses with electric heat.

Id. at 2532-33.

[70]In hearings before the U.S. House of Representatives concerning the Emergency Gas Act of 1977, witnesses confirmed the imbalance of natural gas supplies between the interstate market and the intrastate markets. Governor Briscoe of Texas stated that: "Today we see shortages prevalent in the regulated market and acceptable supply demand equilibrium in the uncontrolled intrastate system." *Emergency Natural Gas Act of 1977: Hearings on H.R. 2500 Before the Subcomm. on Energy & Power of the House Comm. on Interstate and Foreign Commerce*, 95th Cong. 1st Sess. 49 (1977) [hereinafter cited as *ENGA Hearings*] (statement of Dolph Briscoe, Governor of the State of Texas). In pleading for authority to subject intrastate supplies to mandatory allocation, the Governor of New York noted that "[I]t is time that we get down to the business of negotiating whatever we must negotiate to draw upon intrastate supplies . . . that is gas that is being consumed within the producing State, particularly where that gas would otherwise be used for low priority purposes." *Id.* at 51 (statement of Hugh L. Cary, Governor of the State of New York). And, a consumer representative plaintively asked: "[W]hy is the mandatory allocation provision limited to interstate pipelines. Why should we close down factories in Maryland to heat homes in Ohio, while intrastate gas is being burned freely in Texas for night hours at shopping centers or at amusement parks or under boilers that could be burning oil." *Id.* at 120 (statement of James F. Flug, Director and Counsel, Energy Action Committee).

[71]The gas supply imbalance problem provided demands for the extension of federal pricing and allocation regulations into the intrastate markets. The response of Cong. Krueger of Texas to statements made by Governor Brendan Byrne of New Jersey during hearings on the Emergency National Gas Act of 1977 highlights this controversy.

> I see, Governor Byrne, in your testimony that . . . you would like to see $1.44 per thousand cubic feet be the statutory ceiling on emergency sales of natural gas.
>
> In your next paragraph you proceed to say . . . that synthetic gas, which you

plant facilities from using natural gas.[72] Intrastate consumers also were reluctant to allow their gas distributors to participate in the FPC's emergency gas sales programs unless they, rather than their distributors, were credited with all or most of the revenues realized from the distributors' interstate gas sales.[73]

Some interstate pipeline systems had coordinated their supply acquisition and load growth programs better than others. These pipelines faced lower curtailment exposure than the more poorly managed systems. The pipelines facing the greatest curtailment exposure, along with their customers, favored mandatory interconnections and supply rationing among

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have produced at great capital investment cost, should not be counted in your total supply, because that is something you have at home. You . . . indicate that you would like very much to reach down into Texas and Louisiana, where the consumers of those states, as Governor Briscoe has so aptly stated, have through their financing, through their willingness to pay a price three times as high as you are willing to pay, have financed natural gas at or above $1.42 and have brought it in.

If I understand your testimony correctly, Governor, you are saying you would like to hold on to your synthetic gas, which costs you $3.50, but that gas which may have cost Texans $1.75 to bring in, you would like for us to share with you at $1.42.

Now frankly, I do not find that a very attractive argument, and I do not find it even particularly unselfish.

Id. at 66 (statement of Cong. Robert Krueger of Texas).

[72]In resisting provisions in the proposed Natural Gas Emergency Act of 1975, which would have prohibited natural gas use in electric power plants, an executive of a large electric utility operating in the intrastate market testified that:

> If all our natural gas was taken away, we calculate that for the 9-month curtailment period, our added costs of fuel . . . would be $234 million. This would represent an increase of 370 percent, almost five times the cost of the gas taken away from us.
>
> . . . Furthermore, 25 percent of our generating capacity . . . cannot burn oil on a continuous basis . . . . To convert this additional capacity would conservatively cost $92 million with annual carring charges . . . of $16½ million. None of the conversion costs I have used take into account the cost of replacing the 5 to 10 percent of generating capacity lost in the act of converting.
>
> . . . Replacement of all our gas with oil would require about 27 million barrels additional oil during just the 9-month curtilment period. If this has to be imported, the consequences for energy independence and balanced payments is obvious.

Natural Gas Shortages: Hearings on H.R. 2418, H.R. 9408, H.R. 9410, H.R. 9464, H.R. 9708, H.R. 9709, H.R. 9710, and H.R. 9884 Before the Subcomm. on Energy & Power of the House Comm. on Interstate and Foreign Commerce 383 94th Cong., 1st Sess. (1975) [hereinafter cited as Shortages Hearing] (statement of Floyd W. Lewis, President, Middle South Utilities, Inc.).

[73]For example, the Oklahoma Corporation Commission has just recently begun permitting Oklahoma gas distributors to keep 10% of the profits associated with emergency off-system sales after several years of requiring the utilities to credit ratepayers with 100% of the profits associated with such sales. Application of Oklahoma Natural Gas Association for an Increase in Rates, Order No. 247376, at 71 (October 27, 1983).

all interstate pipelines.[74] Such interpipeline rationing was bitterly opposed by areas served by the better managed pipelines.[75]

III. The Seeds of Shortage

At the time the Natural Gas Act of 1938 was passed, no one anticipated that federal regulation of the natural gas industry would lead to short-

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[74]Thus, during the harsh winter of 1976-77, the Governor of Indiana felt compelled to support legislation authorizing mandatory gas allocations, and so instructed the Indiana Congressional Delegation that: "I consider it urgent that President Carter's request for emergency authority to divert natural gas to hard-hit regions of the nation be enacted by Congress as rapidly as possible." Letter from Otis R. Bowen, M.D., Governor of State of Indiana to Members of the Indiana Contressional Delegation (January 27, 1977), reprinted in ENGA Hearings, *supra* note 70, at 48. Moreover, given the severity of the shortages that year, one gas pipeline executive testified that

> [t]he shortage has now become so acute and widespread . . . that there is no interstate pipeline system . . . that has a surplus of gas. Any transfer of gas to meet an immediate problem on another pipeline's system necessarily means . . . that the transferor pipeline is taking gas needed to serve its own distribution company customers in order to supply those of another pipeline.
>
> But . . . , the transferor may well be subjected to injunctions and damage actions by its distribution customers or consumers they serve and to legal actions by state and local government representatives of the areas it serves.
>
> For these reasons, I believe legislation authorizing the President . . . to order the delivery of gas by one pipeline to another is necessary . . . to make it clear that such an order is a complete defense to a legal action arising out of something done or omitted as a result of compliance with that order.

ENGA Hearings, supra note 70, at 75 (statement of Arthur R. Seder, Jr., Chairman and Chief Executive Officer, American Natural Resources Co.).

[75]In 1975, the Interstate National Gas Association was adamantly opposed to mandatory allocations of natural gas. Its position was artfully summarized as follows:

> [T]he entire structure of the industry is based on the proposition that each pipeline is responsible for supplying its own customers under long term agreements. From the pipeline's standpoint, its ability to purchase new supplies of gas, and its capacity to plan its operations are all seriously undermined by the possibility that its gas will be allocated to other pipeline systems. To be specific: How can a pipeline undertake new, high-risk gas supply projects if the prospect is that the gas, when produced, will be diverted to other pipelines? How can a pipeline manage its underground storage system to meet peak winter loads if its storage balances are levied upon in mid-winter to serve another system's customers? How can a pipeline maintain the reserve life index required by its debt capital indentures if its reserves are subject to appropriation to supply another system?
>
> From the standpoint of the customers of the pipeline which it forced to provide gas to another system, the unfairness and dislocations inherent in such allocations are equally manifest. Through payment of the pipeline's cost of service, the distributors supplied by the pipeline and the consumers they serve have provided the financial support that has enabled that pipeline to acquire and transport the gas to market. In particular, gas users served by some pipelines have paid millions of dollars in increased rates to finance advance payments made by the pipeline to the producer to obtain a call on newly discovered gas. Appropriation of that gas to supply another pipeline's customers would amount to nothing less than an expropriation of those advance payments.

ages and market restrictions. During the natural gas industry's early years, natural gas was largely a little valued by-product of oil production.[76] Gas transmission technology was primitive, thus limiting natural gas use to those markets close to the oil and gas fields.[77] Many of the most productive fields were isolated from industrially developed or densely populated areas, so natural gas was flared in order to permit oil production to proceed unabated.[78] As gas transmission technology became more sophisticated, gas could be transmitted greater distances to better markets. Natural gas was still largely a by-product of oil production, however, so natural gas producers perceived their production costs as being very low and regarded their gas sales revenues as icing on the cake.[79] This by-product psychology helped keep wellhead natural gas prices very low.[80]

The tendency toward low natural gas price levels was reinforced by the natural monopoly characteristics of the pipelines. Often, only one natural gas pipeline connected an oil field with feasible natural gas markets. Being virtually the only natural gas purchaser in the field, the pipeline had monopsony power over producers and could acquire natural gas supplies at prices below competitive price levels.[81] As a result of low wellhead prices, pipeline monopsony power, and lowering transmission costs, consumers were provided with gas at low burnertip rates.[82]

Letter from Wilbur H. Mack, Chairman of the Board, Interstate Natural Gas Association of America to Gerald R. Ford, President of the United States (August 27, 1975), *reprinted in Shortages Hearing, supra* note 72, at 236-37.

[76]Federal Power Comm'n v. Hope Natural Gas, 320 U.S. 591, 630 (1944) (J. Jackson dissenting); Permian Area Rates—Initial Decision, 34 FPC 306, 324 (1964); BREYER & MACAVOY, *supra* note 3, at 56.

[77]*See* SANDERS REGULATION, *supra* note 9, at 24, 25.

[78]*See* Determining Just and Reasonable Rates for Natural Gas Producers in the Permian Basin, Opin. No. 468, 34 F.P.C. 159, 174 (1965); *supra* note 77.

[79]*See* Permian Area Rates Case—Initial Decision, 34 F.P.C. 306, 311, 324 (1964).

[80]*Id.*

[81]For example, in Cities Service Gas Co. v. Peerless Oil & Gas Co., 340 U.S. 179 (1950), a case decided before the Natural Gas Act was held to apply to wellhead gas rates, the U.S. Supreme Court upheld an order of the Oklahoma Corporation Commission (OCC) that fixed minimum wellhead rates against various constitutional attacks. The Court summarized the OCC's reasons for fixing minimum rates as follows:

> [T]he Commission concluded that there was no competitive market for gas in the Guymon-Hugoton Field, that the integrated well and pipe-line owners were able to dictate the prices paid to producers without pipe-line outlets, and that as a result gas was being taken from the field at a price below its economic value.

Id. at 183.

[82]Thus, in a Kansas Corporation Commission (KCC) proceeding to establish minimum rates on gas produced in Kansas wells in the Hugoton field, the KCC noted that:

> [G]as is not truly competitive with the two other main fuels; namely, coal and oil. The cheapest and most efficient of the three fuels, gas is more convenient in more uses to the consumer than are the others. This is all borne out by the record. Gas is a commodity. Cheapness of a commodity is an avenue to ultimate waste. It is common knowledge that the records of every pipeline company and distributing

Natural gas pipelines were also perceived to have natural monopoly power at the burnertip. Concerns developed that the pipelines could use their monopoly powers to set burnertip prices above competitive levels. Not only would supracompetitive burnertip rates cause consumers to pay more for gas service, they also would inhibit the creation or expansion of natural gas markets. The producers' desires for expanding natural gas markets converged with consumer desires to acquire gas service at the lowest possible rates; this formed the consensus necessary to impose federal regulation on the interstate pipelines through the enactment of the Natural Gas Act of 1938.[83]

A. *Consumer Anxiety—Wellhead Price Regulation*

Eventually, rising demands for gas caused wellhead prices to rise in absolute and real terms.[84] Having made investments in natural gas consumption facilities, most of which could be converted to use other fuels only at a high cost, if at all, consumers regarded themselves as captured customers vulnerable to unfair increases in natural gas burnertip prices.[85] Ris-

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company are replete with astonishing numbers of conversions from other fuels to natural gas where it is available.

Cities Service Gas Co. v. State Corp. Comm'n, 180 Kan. 454, 304 P.2d 528, 537-38 (1956) (Appendix: Memorandum Opinion), *rev'd*, 355 U.S. 391 (1958). The presiding examiner in the Permian Area Rates Proceeding had a different theory about the low value of natural gas. In his view:

> Although similar in many respects to other petroleum hydrocarbons, the gaseous nature of natural gas makes it much less valuable than liquid hydrocarbons with an equivalent energy value. From wellhead to burnertip it must be connected by an umbilical cord of pipes. For this reason it cannot be used efficiently as fuel for motor vehicles or for engines separated from a pipeline; and as a consequence, a BTU of crude oil or lease condensate is worth some 4 to 6 times the value of a BTU of gas, and a BTU of natural gas liquids some 3 times the value of a BTU of natural gas.

Supra note 79, at 311-312.

[83] *See* Federal Power Comm'n v. Hope Natural Gas, 320 U.S. 591, 609-13 (1943); SANDERS REGULATION, *supra* note 9, at 24-58.

[84] In the Permian Basin Area Rate Cases, it was noted that:

> A significant economic factor has been the rise in the price of natural gas between 1945 and 1960.
>
> Prior to 1945 natural gas had a low economic value. Its price averaged below 4 cents per Mcf. Vast amounts were flared from oil wells and from natural gas plants for lack of a market. Gas reservoirs found in the course of a search for oil were shut in.
>
> Between 1947 and 1960 the average price paid by pipelines for gas trebled from 4.95 cents to 15.61 cents. Even after adjusting for changes in the purchasing power of the dollar, prices in 1960 were some 2.3 times their 1947 level.

Supra note 79, at 312. However, "from 1938 to 1948, the price of gas to consumers actually declined while coal prices increased 70 per cent and oil prices, almost 80 per cent." SANDERS REGULATION, *supra* note 9, at 61.

[85] "Once residential and commercial consumers have installed gas using equipment, they are to a considerable degree locked in; their demand for gas tends to be fixed regardless

ing wellhead prices made consumers anxious, especially since they had doubts as to whether natural gas pipelines price-regulated on a cost plus basis had any incentives to bargain for the lowest possible wellhead prices.[86] From this consumer anxiety came efforts to extend natural gas price regulation under the NGA to the wellhead level. The wellhead pricing debate assumed sectionalist dimensions, since the major consumer forces were located in non-producing states in the north central and northeast regions, while the major producing interests were located primarily in the mid-continent and southwest regions.

The consumer regions won the debate in the judicial arena. Previously, legislative efforts to specify the regulatory status of wellhead pricing had been stalemated.[87] But consumers began arguing before the FPC and the federal courts that an ambiguous section of the NGA gave the FPC regulatory jurisdiction over wellhead prices of gas sold for resale in inter-

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of price i.e. relatively inelastic. The demand of industrial consumers is generally more elastic because they usually have alternative sources of supply. However, in Los Angeles County, where a great amount of Permian gas is consumed, natural gas is virtually required throughout the entire year as a result of additional restrictions on the industrial use of fuel oil imposed in January 1964 to alleviate the smog situation. Also in California as a whole, industrial demand for gas is less elastic than in other areas of the country." *Supra* note 79, at 313-14.

[86]As noted by Sanders:

> Although gas maintained its price advantage in comparison with other fuels, wellhead prices began to rise sharply in the late 1940s. From 1945 to 1956, prices paid to southwestern producers, which had previously been stable or declining, rose from about three cents per thousand cubic feet (mcf) to about nine cents. The wellhead price of gas was only a small fraction of the final price paid by consumers, but it was the only segment of that price that remained beyond governmental control. As prices in the field began to rise, it was inevitable that state regulatory commissions, particularly those in states with large concentrations of consumers, would begin to urge an extension of regulation to gas production itself.

SANDERS REGULATION, *supra* note 9, at 61, 66.

[87]Throughout the 1940's, FPC and U.S. Supreme Court opinions gave rise to fears among producers that the Natural Gas Act might be interpreted to extend federal regulation of natural gas rates to the wellhead level. During this period, the Commission, affirmed by the Supreme Court, applied cost-based regulation to the production facilities of pipelines and their affiliates. Interstate Natural Gas Co. v. Federal Power Comm'n, 331 U.S. 682, 684-93 (1947); Colorado Interstate Gas Co. v. Federal Power Comm'n, 324 U.S. 581, 595-604 (1945); Federal Power Comm'n v. Hope Natural Gas, 320 U.S. 591, 607-15 (1944). Producing states sought legislation to make it clear that the FPC lacked jurisdiction under the Natural Gas Act to set wellhead rates for gas produced by independents, pipelines, and affiliated companies. Such a bill, the Moore-Rizley Bill, H.R. 4501, 80th Cong., 1st Sess. (1947) passed the House, but it died in the Senate in 1948. In the next Congress, a more modest bill, one exempting only independent producers from federal wellhead rate regulation, passed the House in 1949 and the Senate in 1950. This was the Harris-Kerr bill, H.R. 1758, 81st Cong., 1st Sess. (1949). However, President Truman veoted the Harris-Kerr bill in 1950. *See* S. Doc. No. 139, 81st Cong., 2d Sess. (1950). The momentum for a deregulation bill slowed when the FPC issued an opinion, reversing an earlier trend in its opinions, that it lacked regulatory jurisdiction under the Natural Gas Act over the wellhead rates of independent natural gas producers. Phillips Petroleum Co., Opinion No. 217, 10 FPC 246, 261-81 (August 16, 1951), *rev'd sub nom.* Wisconsin v. Federal Power Comm'n, 205 F.2d 706 (D.C. Cir. 1953), *aff'd sub nom.* Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954).

state commerce.[88] The FPC ruled that wellhead prices were not within its jurisdiction under the NGA.[89] The federal courts reversed. The United States Court of Appeals for the District of Columbia Circuit[90] and an affirming United States Supreme Court, ruled that wellhead prices of gas supplies which were sold for eventual resale in interstate commerce should be regulated under the Natural Gas Act.[91]

B. *Average Cost Pricing—Natural Gas Shortages*

The wellhead price regulation established by the interaction between the FPC and the federal courts balanced the just and reasonable rates called

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[88]*See* authorities cited *supra* note 87. The ambiguous section of the Natural Gas Act which provided the legal battleground in the controversy over whether the NGA extended federal regulation to cover rates at the wellhead was § 1b, 15 U.S.C. § 717(b) (1982), which provides that:

> The provisions of this chapter shall apply to the transportation of natural gas in interstate commerce, to the sale in interstate commerce of natural gas for resale for ultimate public consumption for domestic, commercial, industrial, or any other use, and to natural gas companies engaged in such transportation or sale, but shall not apply to any other transportation or sale of natural gas or to the local distribution of natural gas or to the facilities used for such distribution or to the production or gathering of natural gas.

[89]In denying jurisdiction over Phillips, the Commission found that Phillips was exempt because (1) its sales of natural gas were part and parcel of, or at least incident to, production and gathering of natural gas. Phillips Petroleum Co., Opinion No. 217, 10 FPC 246, 276-78, *rev'd sub nom.* Wisconsin v. Federal Power Comm'n, 205 F.2d 706 (D.C. Cir. 1953), *aff'd sub nom.* Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954); and (2) that Phillips sales "are so closely connected with the local incidents of . . . [production and gathering] as to render rate regulation inconsistent or a substantial interference with the exercise by the affected states of their regulatory functions. Id. at 278-79.

[90]The court of appeals based its reversal on its conclusion that:

> [Section 1b] proceeds to exempt both "local distribution" and "production or gathering," but it exempts nothing between "production or gathering" and "local distribution." The exemption of production or gathering does not exempt sales made after production and gathering have been completed.

Wisconsin v. Federal Power Comm'n, 205 F.2d 706, 711 (D.C. Cir. 1953), *aff'd sub nom.* Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954).

[91]In sustaining the court of appeals ruling, the Supreme Court stated:

> [T]he legislative history indicates a congressional intent to give the Commission jurisdiction over the rates of all wholesales of natural gas in interstate commerce, whether by a pipeline Company or not and whether occurring before, during, or after transmission by an interstate pipeline company . . . Thus, we are satisfied that Congress sought to regulate wholesales of natural gas occurring at both ends of the interstate transmission systems.
>
> Regulation of the sales in interstate commerce for resale made by a so-called independent natural-gas producer is not essentially different from regulation of such sales when made by an affiliate of an interstate pipeline company. In both cases, the rates charged may have a direct and substantial effect on the price paid by the ultimate consumers. Protection of consumers against exploitation at the hands of natural-gas companies was the primary aim of the Natural Gas Act . . . . Attempts to weaken this protection by amendatory legislation exempting in-

for by the NGA with rates based on producers' costs of service.[92] The relevant costs were historic average costs of recent production, rather than current opportunity costs.[93] As an increasing cost industry, the natural gas production sector faced marginal costs in excess of average costs. Being limited to receiving prices based on average costs, producers could not and did not produce gas supplies with costs of production in excess of the FPC's average wellhead price calculations.[94]

At the burnertip, natural gas was underpriced. Pipelines and distribution companies had access to gas supplies through a myriad of gas purchase contracts containing a wide variety of pricing terms. Some gas sup-

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> dependent natural-gas producers from federal regulation have repeatedly failed, and we refuse to achieve the same result by a strained interpretation of the existing statutory language.

Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672, 682-85 (1954).

[92]*See* Federal Power Comm'n v. Texaco, Inc., 417 U.S. 380, 400 (1974) ("the Commission lacks the authority to place exclusive reliance on market prices. . . . "); Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061, 1066-69, 1083-84 (5th Cir. 1975), *cert. denied sub nom.* California Co., v. Federal Power Comm'n, 426 U.S. 941 (1976) ("Petitioners have not met their burden of demonstrating that the natural gas rate must reflect noncost, market conditions in order to be just and reasonable, i.e., they have not shown that the FPC policy of basing the natural gas rate on cost rather than on market forces produces an end result which is harmful to the public interest," *Id.* at 1084); Determining Just and Reasonable Rates for Natural Gas Producers in the Permian Basin, Opin. No. 468, 34 FPC 159, 174-76, 189-220 (August 5, 1965)

> Except for those parties who advocate existing contract prices as the primary regulatory standard, all parties recognize that costs must be a major factor in determining the area price. If the area rate approach is to rest on a solid foundation there must be an objective test by which the industry, the consumers and the courts can appraise the fairness of the price we fix. We are convinced that a composite cost determination is the bedrock on which a regulated price must be established.

Id. at 189-90.

[93]In Shell Oil Co. v. Federal Power Comm'n, 520 F.2d 1061 (5th Cir. 975), *cert. denied sub nom.* California Co. v. Federal Power Comm'n, 426 U.S. 941 (1976), the court rejected the commodity value of natural gas as the basis for the first national rate for natural gas by observing:

> The commodity price of gas would most likely be set by the prevailing price of oil and the cross-elasticity of demand between gas and oil. To accept this free market "commodity value" would be to eschew the congressionally mandated responsibility of rate regulation which is devised to reach a "just and reasonable" rate.

Id. at 1083-84. *See also*, BREYER AND MACAVOY, *supra* note 3, at 66-72.

[94]*See* BREYER & MACAVOY, *supra* note 3, at 70:

> The similarity of the final ceiling prices to the provisional prices is not at all surprising, given the method. This is because the provisional price ceilings themselves probably biased the effort to ascertain the cost of new production. If producers surmised that they were unlikely to be able to sell gas at more than these 1960 prices, they would have developed only those reserves having marginal costs lower than such prices. This would have resulted in average costs of new reserves being slightly below the interim ceilings. Thus, using the historical average costs to set future prices was to use historical prices to set future prices.

plies were priced very cheaply under contracts entered into when market conditions gave gas purchasers the edge in bargaining power. Other contracts reflected pricing terms more favorable to producers. Few, if any, of the pricing terms exceeded the FPC's latest average cost calculations. The average gas acquisition costs of individual pipelines and distribution companies were lower than the prices being paid under the latest gas contracts.[95] As a consequence, under the average cost rate methodology used by the FPC and State Public Utility Commissions, consumers faced burnertip prices below the gas suppliers' marginal costs of providing gas service.[96]

With producers receiving wellhead prices below their marginal costs of service and consumers paying burnertip prices below the marginal costs of providing them with services, additions to reserves began to decline while consumption remained above market clearing levels.[97] The gas shortages of the seventies were the inevitable results.

IV. The National Energy Act of 1978

Energy shortages dominated the nation's consciousness during energy policy debates, leading to the enactment of the National Energy Act of 1978.

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[95]This is especially true since the concept of vintaging was introduced in the Permian Basin Area Rate Cases, 390 U.S. 747, 795-99 (1968). Under the concept of vintaging, maximum ceiling prices are set at higher levels for gas produced from the most recently developed wells than for earlier developed wells. *Id.* at 795-96. Production methods, well production characteristics, and producer size have also been factors used to set different levels of rates for gas of the same quality and quantity. *Id.* at 784-87, 795-97.

[96]The utility rate making methodology of the FERC and State Utility Commissions is generally a modified average historical ratemaking method wherein the gas company is entitled to recover directly its prudent non-capital operating expenses, taxes, and depreciation on a dollar for dollar basis plus a rate of return on the undepreciated portion of its total capital investments. *See* Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944); *see also* Determining Relevance of Marginal Costs to Electric Structures in Economic Regulation: Energy, Transportation and Utilities 129-445 (R. Pierce, G. Allison & P. Martin eds. 1980). As a consequence, the rates to individual customers tend to fall below the utility company's marginal cost of service during times when fuel acquisition, construction and capital costs are rising. *See id.* at 411, 413, 415.

[97]From 1964 to 1973, total reserve additions declined from a high of 21.2 Tcf in 1965 to a low of 6.5 Tcf in 1973. Additions to the interstate market, not counting Alaska, ranged from a high of 14.8 Tcf in 1967 to a low of (0.2) Tcf in 1972. From 1970 through 1973, the interstate market's share of annual reserve additions ranged from 0 to 21%. From 1964 to 1969, the interstate market captured a 53 to 74% share, with its share consistently in the 70's from 1966-1969. Sanders Regulation, *supra* note 9, at 126. This performance reflects not only the problem of low price incentives in general, it also reflects the gravitational pull of the higher prices receivable in the intrastate markets as compared to interstate price ceilings. New contract prices for interstate gas were consistently below new contract prices for gas sold exclusively in intrastate markets, with the difference between them widening steadily until the second national rate case, American Public Gas Ass'n v. Federal Power Comm'n, 567 F.2d 1016 (D.C. Cir 1977), *cert. denied*, 435 U.S. 907 (1977), which raised the interstate

The shortage theme was stronger in debates concerning natural gas policy than in debates concerning other energy sources because natural gas shortages had been predicted long before the Arab Oil Embargo of 1973,[98] and had

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ceiling price on new contracts to $1.42 per Mcf. *See* GAS PIE, *supra* note 8, at 63. The differences in new contract prices were as follows:

Year	Interstate New Contract Prices	Intrastate New Contract Prices
1966	17¢	20¢
1967	19	22
1968	19	23
1969	20	26
1970	n.a.	29
1971	27	45
1972	29	63
1973	37	80
1974	46	100
1975	57	140
1976	142	160
1977	142	190

Id.

[98]For example, consider the remarkably prescient opinion of Mr. Justice Jackson in Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944). In questioning whether the traditional utility rate base rate making methodologies should or could be applied to natural gas production facilities in order to set wellhead rates, Mr. Justice Jackson offered the following observations:

> The heart of this problem is the elusive, exhaustible, and irreplaceable nature of natural gas itself. Given sufficient money, we can produce any desired amount of railroad, bus, or steamship transportation, or communications facilities, or capacity for generation of electric energy, or for the manufacture of gas of a kind . . . . But the wealth of Midas and the wit of man cannot produce or reproduce a natural gas field.

Id. at 629. Going further, Justice Jackson stated that:

> Gas itself is tangible, possessible, and does have a market and a price in the field. The value of the rate base is more elusive than that of gas. It consists of intangibles—leaseholds had freeholds—operated and unoperated—of little use in themselves except as rights to reach and capture gas. Their value lies almost wholly in predictions of discovery, and of price of gas when captured, and bears little relation to cost of tools and supplies and labor to develop it . . . . Hence the reason for resort to a roundabout way of rate base price fixing does not exist in the case of gas in the field.

Id. at 648. Moreover, Justice Jackson observed that:

> The amount and quality of service rendered by the usual utility will, at least roughly, be measured by the amount of capital it puts into the enterprise. But . . . [t]here is no such relationship between investment and amount of gas produced . . . . The service one renders to society in the gas business is measured by what he gets out of the ground, not by what he puts into it, and there is little more relation between the investment and the results than in a game of poker.

Id. at 649. Finally, Justice Jackson admonished:

> A price cannot be fixed without considering its effect on the production of gas. Is it an incentive to continue to exploit vast unoperated reserves? Is it conducive to deep drilling tests the result of which we may know only after trial? Will it

been occurring with devastating frequency since 1971.[99]

The brunt of the nation's natural gas shortages was borne by consumers residing within the interstate market.[100] Not surprisingly, the congressional delegations of the states within the interstate market, states which gave President Carter his electoral majority, supported President Carter's natural gas policy proposals.[101] The Carter proposals focused primarily on allocating natural gas supplies more evenly among the states and on giving residential consumers greater protection from curtailment and higher burnertip prices.[102]

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induce bringing gas from afar to supplement or even to substitute for [depleting reserves of] gas? Can it be had from distant fields as cheap or cheaper? If so, that competitive potentiality is certainly a relevant consideration. Wise regulation must also consider, as a private buyer would, what alternatives the producer has if the price is not acceptable . . . . What can it do by way of diverting its supply to intrastate sales? What can it do by way of disposing of its operated or reserve acreage to industrial concerns or other buyers? What can [a producing state] do by way of conservation laws, severance or other taxation, if the regulated rate offends?

Id. at 654-55.

[99]"Pipeline curtailments totalled about one trillion cubic feet in 1970-71; by 1976-77, they reached 3.4 trillion cubic ft." SANDERS REGULATION, *supra* note 9, at 127. Curtailments were also severe in 1977-78. *See* GAS PIE, *supra* note 8, at 56.

[100]*See* BREYER & MACAVOY, *supra* note 3, at 83-87.

[101]*See* SANDERS REGULATION, *supra* note 9, at 165-71.

[102]Part D of President Carter's proposed National Energy Act dealt with natural gas. The stated purposes of Part D were:

(1) to bring the natural gas market back into better balance by reducing the demand for natural gas and increasing the supply through the establishment of an incentive based pricing approach for new natural gas, wherever it is used, that moderates producer revenues and protects consumers by moving toward a commodity value price ceiling;

(2) to deal with short-term supply shortages through extension of the allocation provisions of the Emergency Natural Gas Act of 1977; and

(3) to provide for the conservation of natural gas by pricing natural gas to certain industrial and other users at a level which will provide incentives for conversion to other more plentiful fuels and for conservation.

H.R. 6831, 95th Cong., 1st Sess. § 401(a) (1977), *reprinted in* 207 ENERGY MGMT. (CCH) pt. 4 (May 4, 1977). Under the President's bill, the wellhead prices of all gas, interstate or intrastate were to be regulated. The new gas price was to be a BTU related price equal to a fraction of the average price per barrel crude oil. *Id.* at § § 402(a)(18), 403, 404. (Note that since domestically produced crude oil was at the time being price controlled, this new gas price was not too attractive to gas producers). The President's bill also contained sections establishing incremental pricing, *Id.* at § 414, broadening emergency allocation authorities to allow mandatory allocations of surplus gas from intrastate supplies, *Id.* at § 416, and a strong coal conversion program, *Id.* at § § 601-03.

A good summary of the President's attitude on natural gas policy is contained in his National Energy Plan, as follows:

The pricing of oil and natural gas should reflect the economic fact that the true value of a depleting resource is the cost of replacing it. An effective pricing system would provide the price incentives that producers of oil and natural gas need by focusing on harder to find new supplies. The system should also moderate the adjustment that households will have to make to rising fuel costs. It should end

The congressional delegations from the intrastate gas producing states sponsored different solutions to the nation's gas shortage problems. They advocated the deregulation of all natural gas wellhead prices in order to stimulate increased natural gas production.[103] They opposed mandatory coal conversion, because their economies lacked access to low cost coal supplies, a fact which had caused many of their industries and power generators to become heavily dependent on natural gas as a primary fuel.[104] To encourage efficient natural gas use, the producing states proposed tax incentives instead of tax and pricing penalties to help inefficient gas users

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> the distortions of the intrastate-interstate distinction for new natural gas which is a national resource. It should also promote conservation by raising the ultimate price of products made by energy intensive processes.

The Carter National Energy Plan XI and XII, *reprinted in* 207 ENERGY MGMT. (CCH) pt. 3 (May 4, 1977).

[103]Former Senator Bellmon's (Oklahoma) advocacy of the Pearson-Bentsen deregulation amendment to S. 2104 is a particularly eloquent summary of the producing states' views about natural gas deregulation. 123 CONG. REC. 32, 297-98 (1977). As a part of his advocacy, Sen. Bellmon stated that:

> We in the producing States have long paid the price for energy need, on the intrastate market. We have not exactly enjoyed paying those prices, but we realized that we either had to pay the true cost, or the product would not be available. We have no shortage of gas. The price brought on the supply and reduced the demand. People reduced their demand for gas, not to save gas, but to save money. Now some propose to take away the gas which the people of the producing States have paid for. We do not particularly object to that, as an emergency matter, but when Congress in its great wisdom then says that the future price of the inter and intrastate markets will be regulated at some artificial level, we do have a problem. Some politicians seem determined to enforce policies which will cause consumers to starve to death in the dark. We in the producing States prefer policies which insure production of the gas needed for the Nation. We prefer to continue the progress which has been made in the intrastate market states, where gas prices are uncontrolled, in developing supplies adequate to meet the need.

Id. at 32,297.

[104]In House debate on coal conversion provisions of the Energy Policy and Conservation Act of 1975, Rep. Pickle (D-Texas) made the following plea to delete mandatory conversion requirements:

> I can remember the time when I was a young man working in the west Texas oil fields. We were looking for oil. We had no or little concern for gas. That was in the days of gas flaring, and through all these fields the extra gas was being just burned and was not being put to good use. In our part of the country we found out how to use natural gas, and we began to use it. Not only did we build industries and business by natural gas, we fired most of our utilities by natural gas.
>
> Almost every utility that we have in Texas is fired by natural gas. . . .
>
> This is not so in many parts of the country, because those utilities could burn either coal or oil. In the South and the Southwest, though, natural gas is the only fossil fuel really that they have. . . .
>
> More than that, if we were attempting to comply [with conversion] it would cost us I suppose in the neighborhood of $18 billion in our state alone . . . . The intent to convert is good, but the practical effect is to bankrupt every utility in the Southwest.

121 CONG. REC. 29,331 (1975).

make their facilities more energy efficient.[105] Seeking support from western coal producing states, the intrastate gas producing states proposed market assistance programs to help western coal boomtowns adjust to their new growth without unnecessary trauma.[106]

In the legislative collisions of these alternative energy proposals, the Carter-consumer states' proposals won the first round in the House of Representatives,[107] where the heavily populated consumer states have representation proportionate to their share of the nation's population. However, the producer states and their western coal producing allies had the voting power to block passage of the Carter NEA in the Senate[108] where states are equally represented, despite their populations. Differences in natural gas policy views between the two competing legislative coalitions became the center of the nation's energy policy controversy and held up passage of a national energy plan from August, 1977, until November 8, 1978. The energy policy logjam was broken by compromise and Presidential arm-twisting. The resulting natural gas policies contained in the NEA represent a fusion of the major concepts sponsored by the Carter-consumer states coalition and the natural gas producing states-western coal producing states coalition.

A. *Partial Market Fusion*

The NEA embodies four major philosophies with respect to natural gas policy. First, it reflects the consensus sentiment that whatever wellhead pricing philosophy is adopted, it must apply to both the intrastate and

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[105]Their views became embodied in the energy conservation and conversion incentives reported to the full Senate by the Senate Committee on Energy and Natural Resources and the Senate Committee on Finance. The Senate Committee on Energy and Natural Resources proposed a package of conversion compensation, conversion loans, and conversion loan guaranties. Natural Gas and Petroleum Conservation Act of 1977, 15 U.S.C.S. §§ 210-13, in S. Rep. No. 361, 95th Cong., 1st Sess. 16-19. (1977). *See also* Sen. Rep. No. 361, 95th Cong., 1st Sess. 57-58 (1977). In summarizing the Energy Production and Conservation Tax Incentive Act, which it recommended to the Senate, the Senate Finance Committee observed that:

> This bill uses tax incentives in an effort to reduce demand for energy, to induce conversion from oil and gas to more abundant domestic energy sources, and to increase U.S. production of a broad range energy sources. The committee believes this approach will be more effective than an approach which relies largely on tax increases to reduce demand for energy. Also, unlike the House bill . . . , which emphasized reducing consumption, the committee's bill balances incentives for conservation and incentives for increased energy production.

S. Rep. No. 529, 95th Cong., 1st Sess. 3 (1977). *See also Id.* at 3-11, 30-115.

[106]Assistance to regions impacted (sic) by expanded coal production was proposed in the Natural Gas and Petroleum Conservation Act of 1977, S. 997, 95th Cong., 1st Sess. § 306, in S. Rep. No. 361, 95th Cong., 1st Sess. 22, 23 (1977).

[107]*supra* note 19.

[108]They in fact passed a deregulation bill. *Supra* note 20.

interstate markets. Accordingly, Title I of the Natural Gas Policy Act (NGPA) establishes federal price ceilings on first sales of natural gas that are applicable nationwide.[109] However, the complicated vintaged system created by the wellhead price provisions treat historic interstate gas supplies quite differently from historic intrastate supplies.[110] Historic interstate supplies are also less likely to be deregulated than are historic intrastate supplies.[111] As a result of this difference in treatment, the inventory costs of intrastate pipelines tend to be higher than those of interstate pipelines.[112] The net impact is that the intrastate and interstate markets still are not completely fused together as a matter of national natural gas policy.

B. *Consumer Protection*

Second, the Act reflects the regulatory proponents' desire to protect residential ratepayers from market level gas prices as long as possible. In-

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[109]Title I of the NGPA establishes multiple categories of natural gas ceiling prices that apply to all first sales of natural gas produced in the lower 48 states regardless of whether the sale occurs in intrastate or interstate commerce. NGPA § § 101-110, 15 U.S.C. § § 3311-3320 (1982). Natural gas produced in Alaska from the Prudhoe Bay Unit and transported through the transportation system approved under the Alaska Natural Gas Transportation Act of 1976, 15 U.S.C. § § 719-190, 43 U.S.C. § 1651 (1981) note, is not eligible to be sold under certain incentive price ceilings by which it might otherwise be covered. NGPA § § 102(e), 103(d), 15 U.S.C. § § 3312(e), 3313(d) (1982). Generally, the NGPA seems to assume that most natural gas produced from the Prudhoe Bay Unit will be priced under a catchall price ceiling category that establishes a ceiling price for gas not covered by any other ceiling price category. NGPA § 109(a)(4), 15 U.S.C. § 3319(a)(4) (1982).

[110]The NGPA continues and amplifies the old FPC's practice of establishing vintaged ceiling prices in order to provide special incentive rates for new efforts, NGPA § § 102, 103, 107, 109, 15 U.S.C. § § 3312, 3313, 3317, 3319 (1982); for high-cost, high-risk efforts, NGPA § 107, 15 U.S.C. § 3317 (1982); and for marginal producing wells that may not be produced in absence of higher per unit sales prices (stripper wells production), NGPA § 108, 15 U.S.C. § 3318 (1982). Historic gas supplies are those which on Nov. 8, 1978, the day before the enactment of the NGPA, were dedicated to interstate commerce, NGPA § § 104(a), 106(a), 15 U.S.C. § § 3314(a), 3316(a) (1982), or were subject to an intrastate sales contract, NGPA § § 105(a), 106(b), 15 U.S.C. § § 3315(a), 3316(b) (1982). Generally, the price ceiling philosophy applicable to historic gas supplies is that the real income levels derivable from existing contracts should be preserved. Therefore, the price ceilings of historic gas supplies are essentially comprised of the price being paid for gas under the applicable contracts as of a certain date, adjustable by an escalation provision designed to increase the price ceiling by the rate of annual inflation. NGPA, § § 10-(b), 105(b), 106(a), 106(b), 15 U.S.C. § § 3314(b), 3315(b), 3316(b) (1982). As a consequence of this pricing philosophy, the relative price differentials between interstate sales and intrastate sales of gas that was flowing prior to the NGPA's enactment have been preserved, thereby causing the historic gas acquisition costs of interstate pipelines to be lower than those of intrastate pipelines. *See* Impact of the NGPA on Current and Projected Natural Gas Markets, 47 Fed. Reg. 19157, 19159-61, 19164-66 (1982).

[111]Absent qualification as new gas, high-cost gas, or new onshore well production gas that was not dedicated to interstate commerce on or before April 20, 1977, the only historic gas supplies eligible for deregulation are intrastate gas supplies, the price of which will be in excess of $1.00 per MMBTU on Dec. 31, 1984, by operation of contract pricing terms not involving indefinite escalation clauses in existing or successor intrastate contracts. NGPA, § § 105(b)(3), 121(a)(3), (e), 15 U.S.C. § § 3315(b)(3), 3331(a)(3), § 3331(e).

[112]*Supra* note 110.

stead of immediately deregulating natural gas wellhead prices, the NGPA establishes multiple federal price categories which together form a more complicated version of the old FPC's vintaged pricing system. Old gas is priced on the basis of maintaining its real price level over time as it existed on the day the NEA was enacted.[113] Therefore, producers of old gas will not be able to earn economic rents as the real market value of gas increases. Incentive rates are provided for new gas and high cost gas categories.[114] These incentive rates reflect the regulatory proponents' acceptance of the fact that the cost of discovering and developing new gas reserves is rising. While some gas categories are to be deregulated,[115] the deregulation is phased over a period of years and can be rescinded temporarily if the results are not compatible with the nation's political and economic environment.[116] The phased approach to deregulation reflects the regulatory proponents' views that deregulation should be approached on an experimental basis over a time frame long enough to insure that consumers will not face any dislocating price shocks.

The NGPA and the companion Powerplant and Industrial Fuel Use Act[117] (PIFUA) further protect the residential gas user by continuing many of the burdens industrial users faced under the NGA.[118] The NGPA establishes an incremental pricing policy which forces large industrial users to bear the brunt of the costs of the incentive rate gas acquired by the pipelines and distribution companies which serve them.[119] The NGPA's

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[113]*Id.*

[114]*Id.*

[115]*Supra* note 111.

[116]Section 122 of the NGPA, 15 U.S.C. § 3332 (1982), provides a standby price control authority permitting either the President or the Congress to reimpose price controls on gas that was deregulated on January 1, 1985, for a one time reimposition period of 18 months commencing any time between July 1, 1985, and June 30, 1987. The President may reimpose price controls by written order issued after May 31, 1985, which will become effective within 30 days unless Congress nullifies the order with a concurrent resolution of disapproval within the 30 day waiting period. NGPA, § 122(c)(1), 15 U.S.C. § 3332(c)(1) (1982). Congress can impose the standby controls through a concurrent resolution any time after May 31, 1985, which will cause the price controls to take effect at the first of the month following the passage of the resolution. NGPA, § 122(c)(2), 15 U.S.C. § 3332(c)(2) (1982).

[117]Pub. L. No. 95-620, 92 Stat. 3289 (1978) (codified in scattered sections of 42, 45 U.S.C. and 15 U.S.C. § 796, 49 U.S.C. § 26b) (1982).

[118]For a summary of the earlier curtailment and pricing burdens borne by industrial users, *see supra* notes 47-56 and accompanying text.

[119]Title II of the NGPA, § § 201-208, 15 U.S.C. § § 3341-3348 (1982), establishes an incremental pricing scheme designed to allocate more of the gas acquisition costs attributable to the purchase by pipelines and distributing companies of gas eligible for incentive rate price ceilings under the NPGA, certain gas imports, and other supplemental supplies to price-sensitive industrial users than to other higher priority end-users. Congress hoped that incremental pricing would (1) forc interstate pipelines to restrain their bids for new gas supplies in order to keep from losing their industrial loads, and, (2) by keeping these new gas bids down and allocating more of the costs to industrials, shield higher priority customers

curtailment policies target industrial users as the first users which should be curtailed in times of shortages.[120] Under the PIFUA, existing industrial users and electric power plants, under certain conditions, may be required

from much of the increased costs of acquiring gas attributable to the NGPA's gradual deregulation. Rule Required Under Section 202 of the Natural Gas Policy Act of 1978, Order No. 80, 45 Fed. Reg. 31622, 31623 (1980).

Incremental pricing was to be adopted in two stages. The first stage was to be implemented within 1 year from the date of the NGPA's enactment by FERC rules, and was to be applicable only to "boiler fuel use of natural gas by any industrial boiler fuel facility." NGPA, § 201, 15 U.S.C. § 3341 (1982). The FERC issued this rule on Sept. 28, 1979. Regulations Implementing the Incremental Pricing Provisions of the Natural Gas Policy Act of 1978, 10 C.F.R. § 282 (1984). In the second phase, the FERC was to extend by additional rulemaking incremental pricing to "any industrial facility which is within a category defined by the Commission" and is not otherwise exempt within 18 months of the NGPA's enactment. NGPA, § 202, 15 U.S.C. § 3342 (1982). The Commission, over vigorous protest, issued the Phase II rule on May 6, 1980. Rule Required Under Section 101 of the Natural Gas Policy Act of 1978, Order No. 80, 45 Fed. Reg. 31622 (May 13, 1980).

However, Phase II was subject to a congressional veto, which could occur by a resolution of disapproval by either House of Congress within 30 days after the rule was submitted to Congress for review. NGPA, § 202(c), 15 U.S.C. § 3342(c) (1982). On May 20, 1980, the House voted 369-34 to veto the Phase II rule. H. Res. 655, 96th Cong. 2d Sess., 126 CONG. REC. H3855 (1980). The House vetoed Phase II because of (1) uncertainty about the potential impacts of incremental pricing; (2) concern that incremental pricing was not effective in furthering the market-ordering tasks it was to facilitate; (3) interfuel competition from No. 6 fuel oil which was inducing enough bidding restraint to make incremental pricing superfluous; and (4) fear that the effects of an expanded incremental pricing might exacerabate the inflationary and recessionary conditions then facing the country. H.R. Rep. No. 938, 96 Cong., 2d Sess. 13-14 (1980).

Consumer groups challenged the constitutionality of the congressional veto. FERC Order Denying Rehearing and Revoking Amendments Made by Order No. 80, 45 Fed. Reg. 54741 (Aug. 18, 1980). The FERC rejected the constitutional argument, *Id.*, but the consumer groups prevailed on appeal. Consumer Energy Council of America v. Federal Energy Regulatory Commission, 673 F.2d 425 (D.C. Cir. 1982), *aff'd sub nom.* Process Gas Consumers Group v. Consumer Energy Council of America, 77 L. Ed. 2d 1402 (1983) (J. White, dissenting), 77 L. Ed 2d 1403-04. Ultimately the F.E.R.C., in considering the status of Phase II after the congressional veto was declared unconstitutional, concluded that its Phase II expansion should be revoked for the same reasons the Congress cited in vetoing it. Rule Required Under Section 202 of the Natural Gas Policy Act, Order No. 363, 49 Fed. Reg. No. 62 12207 (1984). Relying on the decision in Ohio Ass'n of Community Action Agencies v. Federal Energy Regulatory Comm'n, 654 F.2d 811 (D.C. Cir. 1981)(exempting industrial customers from incremental pricing surcharges that would cause their delivered price of gas to exceed the price of No. 6 fuel oil), the Commission ruled that it could lawfully decline to expand incremental pricing beyond Phase I by exempting all end-users that potentially would be affected under Phase II. Order No. 363, 49 Fed. Reg. No. 12207, 12208-09 (1984).

[120]The NGPA's curtailment policies are found in Title IV, §§ 401-04, 15 U.S.C. §§ 3391-94 (1982). In general, the NGPA adopted the FPC's end-use curtailment approach, but modified the priorities to give certain social institutions, agricultural uses and industrial process and feed stock uses more specific and higher priorities than they were previously given. Thus, § 401 of the NGPA, 15 U.S.C. § 3391 (1982), specifies that essential agricultural users without fuel alternatives are to be accorded a curtailment priority higher than all users other than a high priority user, who is a person that:

(A) uses natural gas in a residence;
(B) uses natural gas in a commercial establishment in amounts of less than 50 Mcf on a peak day;
(C) uses natural gas in any school, hospital, or similar institution; or

to convert away from using natural gas as a boiler fuel.[121] Further, natural gas is forbidden as a boiler fuel for most new major industrial and power plant facilities.[122]

C. *Gradual Deregulation*

Third, the Act reflects the deregulation proponents' beliefs that a free market can operate at the producer level just as fairly and even more efficiently than can any system of cost-based wellhead price controls. Thus, the NGPA establishes total deregulation of natural gas wellhead prices as the ultimate goal.[123] The fact that, in the short run, the Act only partially decontrols gas prices reflects the deregulation proponents' concessions to distributional justice. Old gas prices are kept at constant real levels as a means of cushioning the impact on consumers of the higher incentive and market prices applicable to new and high cost gas. The gradual decontrol reflects the deregulation proponents' awareness that consumers need time to adjust politically and economically to the reality of higher natural gas prices.

(D) uses natural gas in any other use the curtailment of which the Secretary of Energy determines would endanger life, health, or maintenance of physical property.

NGPA § 401(f)(2), 15 U.S.C. § 3391(f)(2) (1982). Further, § 402 of the NGPA, 15 U.S.C. § 3392, specifies that gas users using gas for essential industrial process and feedstock uses and lacking fuel alternatives are to be given a priority higher than all users other than essential agricultural users and high-priority users.

For an overview of the complexities the NGPA added to the formation of interstate pipeline curtailment plans, see Process Gas Consumers Group v. Federal Energy Regulatory Comm'n, 712 F.2d 483 (D.C. Cir. 1983); Process Gas Consumers Group v. U.S. Dept. of Agriculture, 694 F.2d 728, *reh'g granted in part*, 694 F.2d, 792 (D.C. Cir. 1981), *rev'd in part*, 694 F.2d 778 (D.C. Cir. 1982), *cert. denied sub nom.* United Gas Pipe Line Co. v. Federal Energy Regulatory Commission, 103 S.Ct. 1874 (1983). Note, that the NGPA's curtailment authorities apply only to interstate pipelines. Therefore, the old intrastate-interstate dichotomy is not ended by the NGPA with respect to curtailment policies.

[121]Essentially, unless covered by a temporary or permanent exemption, existing power plants and major fuel burning installations may be required to convert to the use of a fuel other that petroleum or natural gas if it is economically and technically feasible for them to use an alternate fuel without incurring substantial physical modifications or reductions in their rated capacities. Powerplant and Industrial Fuel Use Act §§ 301-03, 311, 312; 42 U.S.C. §§ 8341-43, 8351, 8352 (1982). Most of the exemptions relate to (1) difficulties in acquiring alternate fuel or meeting environmental, site, or other governmental regulations; (2) use of fuel mixtures or supplemental gas supplies; (3) difficulties in operating adequately or providing essential services reliably. PIFUA, § 312, 42 U.S.C. § 8352 (1982).

[122]Subject to the same type of exemptions relating to existing fuel burning facilities, *supra* note 121, new electric power plants and major fuel burning installations are prohibited from using natural gas or petroleum as primary energy sources. PIFUA, §§ 201-02, 211-13, 42 U.S.C. §§ 8311-12, 8321-23 (1982).

[123]The NGPA provides for deregulation of only certain natural gas supplies. NGPA § 121, 15 U.S.C. § 3331 (1982); *supra* notes 110-11. Total deregulation will not be achieved until all gas subject to permanent NGPA price ceilings is totally depleted. This means total deregulation will not occur until sometime in the mid to late 1990's.

D. *Freer Gas Flows*

Fourth, the NGPA embodies mechanisms designed to permit freer flows of gas between the intrastate markets and the interstate market so that gas surpluses in one market may be used to relieve gas shortages in another. However, reflecting the conditions prior to the enactment of the NEA, when the surpluses were intrastate and the shortages were interstate, the NEA's allocation mechanisms favor intrastate gas flows into the interstate market. The emergency mandatory transfer authorities under the Public Utility Regulatory Policies Act and the NGPA benefit only high priority end-users in interstate markets and affect only gas supplies owned or transported by interstate pipelines.[124] NGPA emergency purchase authorities cannot be used to acquire gas supplies from interstate pipelines.[125] The NGPA permits intrastate pipelines to sell or assign surplus gas quantities to the interstate market, but interstate pipelines are not given similar authority.[126] Intrastate pipelines are given exemptions from federal regulation under the NGPA's transportation authorities with respect to transportation services they perform for the interstate market.[127] Interstate pipelines are also permitted to perform transportation services for intrastate pipelines.[128] Finally, the NGPA imposes transfer barriers on the sale of historic interstate gas supplies that do not apply to the sale of historic intrastate gas supplies.[129]

V. Post-Shortage Gastric Distress

In the six years the NGPA has been in force, many changes have occurred within the energy markets of the United States. The world energy crisis of 1973-74 helped spur a worldwide effort to secure non-OPEC sources of oil, eventually resulting in the discovery and development of large producing fields in Alaska, Mexico and the North Sea.[130] Another energy crisis occurred in 1979, triggered by the Iranian Revolution. This crisis caused world oil prices to rise dramatically between 1979 and 1981 to a

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[124]See Public Utility Regulatory Policies Act of 1978, § 607, 15 U.S.C. 717z (1982); NGPA, § 303, 15 U.S.C. § 3363 (1982).

[125]NGPA, § 302, 15 U.S.C. § 3362 (1982).

[126]NGPA, §§ 311(b), 312, 15 U.S.C. §§ 337a(b), 3372 (1982).

[127]NGPA, § 601(a)(1)(C), (a)(2), 15 U.S.C. § 3431(a)(1)(C), (a)(2) (1982).

[128]NGPA § 311(a), 15 U.S.C. § 3371(a) (1982).

[129]The NGPA accomplishes this by not removing the sales of historic interstate gas supplies from the Natural Gas Act jurisdiction unless such historic supplies qualify as new natural gas, high-cost natural gas, or natural gas produced from a new, onshore production well. NGPA, § 601(a)(1)(B), 15 U.S.C. § 3431(a)(1)(B). Therefore, such historic interstate supplies are subject to NGA abandonment requirements and cannot be transferred unless the transferor obtains an abandonment certificate. *See supra* and accompanying text.

[130]Yergin Crisis, *supra* note 6, at 8-10; E. Shapiro, Macroeconomic Analysis 540-41 (5th ed. 1982) [hereinafter cited as Shapiro Analysis].

level approximately three times what they were the day the NGPA was enacted into law.[131] Meanwhile, the United States phased out its price controls on domestic oil supplies from mid-1979 to January 1981.[132]

The dramatic jump in world oil prices caused the market values of all conventional energy sources to rise in concert. These increasing market values stimulated greater energy production activity. Decontrol of domestic oil prices reinforced this production trend, and unprecedented numbers of oil wells were drilled in 1979 through 1982.[133] The decontrol mechanism of the NGPA permitted natural gas prices to rise throughout this period.[134] However, since the NGPA pricing mechanism was premised on the prediction that world oil prices would be only fifteen dollars per barrel by 1985,[135] the NGPA kept natural gas wellhead prices from rising as fast as oil prices, except for wellhead prices of deregulated high cost gas. As a consequence, production incentives on natural gas were not as generous as they were on oil, and natural gas reserve additions were not as large as they otherwise might have been.[136]

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[131]*See* YERGIN CRISIS, *supra* note 6, at 1, 3; SHAPIRO ANALYSIS, *supra* note 130, at 540.

[132]The Energy Policy and Conservation Act, Pub. L. No. 94-163 § 18, 89 Stat. 871, 955 (1975), extended mandatory price controls on domestically produced crude oil for forty months beginning December 22, 1975, and extended discretionary price controls until Sept. 30, 1981. As the EPAA's mandatory controls approached expiration, President Carter extended the control period under his discretionary authority to provide for a gradual decontrol of all oil and petroleum products from June 1, 1979, to Oct. 1, 1981. President Carter's address to the nation of April 5, 1979, in 15 Pres. Doc. 609-14 (1979). President Reagan terminated President Carter's phased decontrol and immediately removed price and allocations controls from the petroleum industry on Jan. 28. 1981. Exec. Order No. 12287, 46 Fed. Reg. 9909 (1981). Allison, *Energy Sectionalism: Economic Origins and Legal Responses, 38* Sw. L. J. 703, 719#n.72 (1984).

[133]The total exploratory and development oil wells drilled during this period were 19,383 (1979); 27,026 (1980); 37,671 (1981); 40,301 (1982). *Energy Information Administration Monthly Energy Review*, Pt. 5. Oil & Gas Resource Development 64 (Apr. 1984) [hereinafter cited as *April Energy Review.]*

[134]The national average wellhead natural gas prices rose steadily, $1.18 Mcf (1979), $1.59 Mcf (1980), $1.98 Mcf (1981), $2.62 (1983). Natural gas wellhead prices experienced some softening in 1983, falling below the February $2.64 Mcf average until September, when the average price rose to $2.70 Mcf. From September, 1983, through March, 1984, wellhead prices have been spotty: $2.62 Mcf (Oc., 1983), $2.63 Mcf (Nov., 1983), $2.65 Mcf (Dec., 1983), $2.72 Mcf (Jan., 1984), $2.64 Mcf (Feb., 1984), $2.66 Mcf (Mar., 1984). *April Energy Review, supra* note 133, at 98.

[135]*See* Ringleb, *Natural Gas Producer Price Regulation Under the NGPA: Regulatory Failure, Alternatives, and Reform, 20* Hous. L. Rev. 709, 712 n. 7 (1983).

[136]*See* ERICKSON, NATURAL GAS AND THE NATURAL GAS POLICY ACT: A PRAGMATIC ANALYSIS III, 2-6, 28, 53-59 (1981); United States Department of Energy, Securing America's Energy Future—The National Energy Plan:—A Report to Congress Required by Title VIII of the Department of Energy Organization Act, (Public Law 95-91) 5-6 (1981). *See also April Energy Review, supra* note 133, showing that from 1979-1982 total exploratory and development wells drilled for the year increased from 49,816 in 1979 to 85,795 in 1982, with the number of oil wells increasing from 19,383 in 1979 to 40,301 in 1982, while the number of gas well increased only from 14,681 in 1979 to 18,952 in 1982. (Dry holes account for wells unaccounted for by oil and gas wells).

Meanwhile, the high energy prices contributed to the high inflation the United States experienced in 1979 through 1981, and were also factors in the United States' recessions of 1979-80 and 1981-82. These recessions caused domestic energy consumption to fall off significantly over the last two years.[137] High energy prices caused the nation's energy consumers to become more efficient than anyone imagined they would, and U.S. energy demands fell even more.[138] The convergence of stable or increasing energy supplies and lower energy demands has thus produced downward pressures on domestic energy prices. Crude oil and petroleum products prices have been very responsive to downward market pressures.[139]

A. *Sticky Gas Prices*

Within domestic gas markets, a different scenario has occurred. A deliverability surplus has appeared nationwide and within the service areas of most gas transmission and distribution companies.[140] Yet, contrary to

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[137]Total energy consumption for the last 11 years was as follows:

Year	Energy Consumption (Quads)
1973	74.212
1974	72.479
1975	70.485
1976	74.297
1977	76.215
1978	78.039
1979	78.845
1980	75.900
1981	73.940
1982	70.822
1983	70.638

Through April of 1984, 1984 energy consumption has been running well ahead of 1983's pace. *April Energy Review, supra* note 133, Pt. 2, at 21.

[138]*Id.* Also, recent trends in natural gas demand show that since the 1979 peak demand of 20.24 tcf, domestic demand for gas has fallen steadily. This decline is attributable mainly to "decreasing oil prices, conservation by natural gas users and reduced industrial activity." United States Department of Energy, First Report Required by Section 123 of the Natural Gas Policy Act of 1978 2-1 through 2-3 (1984) [hereinafter referred to as DOE NGPA Report].

[139]

	1981	1982	1983
Domestic Avg. Crude Oil Wellhead Price*	$31.77	$28.52	$26.19
Composite Refiner Acquisition Cost of Crude Oil*	$35.24	$31.87	$28.99
Residual Fuel Oil Avg. Sales Price to End-Users†	75.6¢	67.6¢	65.1¢

*Price in dollars per barrel
†Price in cents per gallon excluding tax

April Energy Review, supra note 133, Pt. 9, at 87, 93.

[140]*DOE NGPA Report, supra* note 138, at 2, 3, 2-4, 2-5. The DOE estimated that the deliverability surplus, the difference between productive capacity and actual production, peaked in 1983 at 3-5 TCF. The DOE further predicts that the surplus will decline to 1-3 TCF in 1984 due to increased consumption and reductions in drilling activity caused by the

the mechanics of a free market, rigidities in natural gas industry contracting customs, inflexibility in the regulation of gas transmission and distribution companies, and the effects of partially decontrolling natural gas wellhead prices have combined to cause natural gas wellhead and burnertip prices to increase even in the face of the deliverability surplus.[141]

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dampening effects of the surplus overhanging the natural gas market. *See also*, Inquiry on Impacts of Special Marketing Programs on Natural Gas Companies and Consumers, 49 Fed. Reg. 3193, 3193-95 (1984), noting that the surplus has been overhanging U.S. natural gas markets since 1981.

[141] *Id.* Average wellhead natural gas prices rose steadily from an annual average of $1.59 Mcf in 1980 to $2.62 in 1983. Average end-user prices have also risen steadily over the same period: $2.53 to $4.25 Mcf for industrial purchasers, $2.28 to $3.58 Mcf for electric power plants, and $3.68 to $5.99 (est.) Mcf for residential consumers. *April Energy Review*, *supra* note 133, Pt. 9, at 98.

These price increases have been stimulated by a variety of factors. First, some gas purchasers have alleged that:

> the combination of NGPA price deregulation of a small amount of total supplies and the Commission's historic regulation of pipeline rates under the NGA, which allows averaging, unduly subsidize[d] the production of deregulated gas to the detriment of the ultimate users. Since the price of this deregulated gas [was] allowed to be "rolled-in" with the price of less expensive supplies there is little incentive to attempt to keep the price low through negotiation . . . .

NGPA Impacts, *supra* note 6, at 19,159-60. As a result, deregulated section 107 gas was sold for prices as high as $7-10 per MMBTU. *Id.* at 19159.

Second, the gas shortage psychology engendered by the pre-NGPA gas shortages combined with producers' desires to to reduce their risks on expensive new exploration and production projects to cause an intense price and non-price competition for new gas supplies since 1973. As a consequence, "many of the 1973-79 take-or-pay provisions require takes up to 90% of the deliverability of the acreage dedicated to the contract." Review of Offsystem Sales Program; Informal Public Conference, 47 Fed. Reg. 37664, 37665 (1982). High take-or-pay provisions have contributed to rising gas prices, because pipelines must either take the contractual take-or-pay quantities or pre-pay for them at the contract price. Recently pipelines have been faced with declining demands due to conservation, fuel switching and recession, causing end user demands for natural gas to fall below the pipelines' take obligations. The resulting prepayment liability exposure has been estimated to be as high as $10.5 billion between 1982-1985. *DOE NGPA Report*, *supra* note 138, at 3-6. Faced with this dilemma, pipelines have sought to reduce their take-or-pay liabilities by increasing their rakes of high-cost gas while reducing their takes of law cost gas. *Id.* at 3-4, 3-5; Take or Pay Provisions in Gas Purchase Contracts – Statement of Policy, 47 Fed. Reg. 57268 (1982) [hereinafter cited as Take-or-Pay Policy].

Third, most gas purchase contracts contain indefinite escalator price clauses which permit producers to collect applicable NGPA ceiling prices. With NGPA ceiling prices automatically increasing at a rate equal to or greater than the annual inflation rate, purchasers face automatically increasing prices. *See* Governor Signs Measure to Limit Prices on Gas Produced, Consumed within New Mexico, 12 ENERGY USERS REP. (BNA) 251 (March 22, 1984).

Finally, the FERC has been relatively permissive in permitting pipelines to quickly pass through their purchased gas acquisition costs to consumers. Their ability to pass through their gas acquisition costs has reduced the pipelines incentives to hold down costs. Unitl recently, the FERC attempted to provide pipelines with cost minimizing incentives by disallowing expenses it found to be imprudently incurred. However, the NGPA eliminated the prudency standard and replaced it with a fraud and abuse standard which, as interpreted by the FERC, is a considerably easier standard for the pipelines to meet. *See* Natural Gas; Fraud

B. *Industrial Load Losses*

More recently, the prices in new natural gas contracts have gone down,[142] and some prices and other terms in existing contracts have been renegotiated.[143] While this downward movement of wellhead prices has provided some relief from the upward pressures on burnertip prices, in many cases this relief has been inadequate to prevent gas burnertip prices from rising above the falling prices of residual fuel oil and other substitutes for industrial uses of natural gas.[144] With their industrial gas burnertip prices above market clearing levels, many gas distribution companies have lost industrial loads. These industrial load losses have forced the distributing companies to impose greater fixed cost burdens on their remaining customers, causing per unit delivered prices of gas to rise.[145]

C. *Potential Price Fly-up*

On January 1, 1985, the prices of nearly sixty percent of the nation's flowing gas were decontrolled.[146] With oil prices much higher than they were predicted to be by the authors of the NGPA, many of the contracts on these flowing gas supplies could produce wellhead prices well above their December 31, 1984, NGPA price ceiling.[147] The result could be a

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Standard; Statement of Policy, 47 *Fed. Reg.* 6253 (1982) [hereinafter cited as FERC Fraud Std]. Under the new fraud and abuse standard, costs that would have been disallowed under the prudency standard have been routinely allowed by FERC. *See* Columbia Gas Transmission Corp. Opin. No. 204, 26 F.E.R.C. ¶ 61,034 (Jan. 16, 1984); Columbia Gas Transmission Corp., Opin. No. 204-A, 26 F.E.R.C. ¶ 61,334 (Mar. 16, 1984).

[142]Partly because of the decline in new gas contract prices, average wellhead prices increased by only 2.4% in 1983. This represents a significant moderation in natural gas prices, since from 1979 to 1982 average wellhead prices increased over a range of 14.1% to 24.2%. DOE NGPA Report, *supra* note 138, at 1, 1-1. Moreover, the projected change in wellhead prices of high cost (section 107) gas for 1983 is a negative 14.2%. *Id.* at 1-1, 1-4.

[143]In response to U.S. Department of Energy inquiries, the Interstate Natural Gas Association of America reported that pipelines have successfully renegotiated some take-or-pay obligations, but "to date, pipelines report virtually no success in renegotiating pricing provisions such as indefinite price escalator clauses and other control terms which will put upward pressure on gas prices upon partial decontrol." 12 ENERGY USERS REP. (BNA) 463 (May 31, 1984). *See also* DOE NGPA Report, *supra* note 138 at 5-1, 5-2.

[144]Over the past three years, gas prices have moved closer to the prices of oil in all markets where the two fuels compete. The gap between the two fuels closed completely in the industrial market before it reopened to a 51¢ per MMBTU differential in favor of gas in January, 1984. From January, 1981, to January, 1984, the gap in the residual market narrowed from $4.26 MMBTU to $1.71 per MMBTU. 12 ENERGY USERS REP. (BNA) 494 (June 7, 1984). According to one commentator, "52 percent of all industrial users have the capability to switch to oil, . . . and about 75 percent of those have the capability to switch to residential fuel oil." 12 ENERGY USERS REP. (BNA) 144 (Feb. 23, 1984) [comments of Nicholas J. Bush of the Natural Gas Supply Association]. Data indicate that in 1982 "317 billion cubic feet of gas use was lost to oil . . . and 55 percent of that conversion was to residual fuel oil." *Id.*

[145]*See* FERC Fraud Std., *supra* note 141, at 6255-56.

[146]*See* DOE NGPA Report, *supra* note 138, at 6-3.

[147]The primary concern is over the effects of indefinite price escalation clauses on natural gas contract prices of supplies scheduled to be deregulated in 1985. Some escalators call for

damaging fly-up in natural gas prices, taking them well above market clearing prices at the wellhead and the burnertip.[148]

D. *Future Gas Shortages*

Present and prospective burnertip prices, in excess of natural gas market clearing prices, is restricting the demand for natural gas supplies to subefficient levels. Facing declining markets, gas transmission and distributing companies are trying to extricate themselves from pricing and taking obligations in their current contracts.[149] In response to this downward

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prices equal to 110% of fuel oil No. 2 under so-called oil parity clauses. By 1980, 59.1% of all post-NGPA production volumes (production from wells subject to the NGPA's incentive rates under sections 102, 103, 107, and 108) was being sold under contracts with deregulation clauses and indefinite price escalation provisions. ENERGY INFORMATION ADMINISTRATION, NATURAL GAS PRODUCER/PURCHASER CONTRACTS AND THEIR POTENTIAL IMPACTS ON THE NATURAL GAS MARKET 32, table 10 (1982) [hereinafter referred to as EIA CONTRACT ANALYSIS]. Furthermore, 21.5 percent of the gas volumes being sold under deregulation and indefinite price escalation provisions were subject to oil parity clauses. *Id.* at 33, table 11. Even more ominous was the fact that only 21% of such volumes was subject to contracts with market out clauses, and only 9.7% was subject to contractually specified maximum prices. *Id.* However, 57.2% of section 107 gas volumes subject to indefinite price escalation was also subject to market out provisions. *Id.* Statistics such as these spurred fears that the January 1, 1985, deregulation would cause average wellhead and burnertip gas prices to soar above previous levels, and well above the levels of alternative fuels. *See* Means, A PRELIMINARY ANALYSIS OF THE NATURAL GAS MARKET-ORDERING PROBLEM 2, 25, 34-45 (1981). In quantitative terms, pipeline trade associations estimated in 1981 that average wellhead prices could increase by 50 to 60% between 1984 and 1985. 12 ENERGY USERS REP. (BNA) 336 (April 19, 1984).

[148]Recently, fears about a fly-up have diminished. The Interstate Natural Gas Association of America now predicts only a 9 to 12% increase in average wellhead prices in 1985. The downscaling of the fly-up predictions stems from 3 factors: (1) More recent assessments use lower forecasts for world oil prices because of a softening in world markets; (2) More extensive information indicates that a smaller portion of deregulated gas is involved in contracts governed by indefinite price escalators; and (3) More recent studies factor in the effects of market-out clauses. 12 ENERGY USERS REP. (BNA) 336 (April 19, 1984).

Recent DOE forecasts predict an even smaller increase in wellhead prices in 1985 (about 2-3%), and attribute these potential increases solely to demand increases and gas bubble reductions. DOE NGPA Report, *supra* note 138, at 6-3. Factors the DOE cites as providing limits on a price fly-up include: (1) increasing wellhead price flexibility because the percentage of gas volumes subject to market-out provisions is increasing due to renegotiations, and because most new gas purchase contracts contain market-out clauses, (2) increasing gas-on-gas competition among pipelines, distribution companies, and producers for the business of end-users; (3) continuing competitive pressures from alternative fuels, especially fuel-oil. *Id.* at 6-1 to 6-8.

[149]Pipelines are attempting to shed onerous take-or-pay and pricing burdens by a variety of methods, including: (1) invoking market-out clauses in high cost contracts to extinguish the contracts or renegotiate their more burdensome terms; (2) attempting to get producers to directly renegotiate pricing or taking terms or to insert market-out provisions in contracts presently lacking buyer protection mechanisms; (3) initiating off-system sales to improve their sales and to increase their capacity to honor their take obligations; (4) establishing special marketing programs designed to retain industrial loads, reduce take-or-pay liabilities, and increase overall gas sales; and (5) refusing to honor their take-or-pay obligations where other avenues of burden reduction are unavailable. This has resulted in produc-

pressure on contract prices and takes, producing gas wells are being shut-in and new drilling rates have fallen drastically.[150] These falling drilling rates are generating fears that a strong economic recovery or another Middle East energy crisis could turn a deliverability surplus into shortages.[151] While reserve additions have exceeded production levels over the last three years,[152] with drilling rates down, reserve additions will fall to lower levels and the deliverability of gas could decline significantly over the next few years.[153]

E. *The Bid-away Problem*

In general, the NGPA price ceilings created a disparity between intrastate pipelines and interstate pipelines in the gas acquisition costs. Prices of gas flowing under contract on November 9, 1978, were essentially frozen, except for regular inflation adjustments. Also, prices on flowing gas were generally higher in the intrastate markets than they were in the interstate markets.[154] Thus, the real prices of old intrastate gas have been

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ers either forgiving the obligation, thereby implicitly renegotiating, or filing suit and confronting pipeline defenses based on force majeure theories. DOE NGPA Report, *supra* note 138, at 5-1 to 5-10. When avoidance of onerous contractual obligations has been too difficult, pipelines have sought to reduce their financial hardships by taking high cost gas instead of low cost gas; the FERC allows direct recovery of the costs of gas actually taken but requires capitalization of take-or-pay prepayments, the ultimate recovery of which is uncertain. *See* Take-or-Pay Policy, *supra* note 141; DOE NGPA Report, *supra* note 138, at 3-4, 3-5, 5-4.

[150]For example, in 1983 a recent Merrill Lynch report states that new drilling declined about 17.7% in 1983 and projects another 10.3% decline in 1984. 12 ENERGY USERS REP. (BNA) 224 (March 15, 1984). Gas wells are being shut-in as pipelines attempt to ration their declining demands among their contractual suppliers with the aid of, or maybe more properly, under the command of state conservation commissions. *See* 11 ENERGY USER REP. (BNA) 710 (July 14, 1983). *See also* Inquiry into Purchasing Practices of Interstate Pipelines – Informal Public Conference, 48 Fed. Reg. 25, 264 (1983).

[151]Opinions about impending gas shortages range from producers' allegations that shortages are inevitable sometime within the next three (3) years, 12 ENERGY USERS REP. (BNA) 312 (April 12, 1984) [Statements of Donald P. Mitchell, Vice President-processing and marketing for the Louisiana Land and Exploration Company; Stuart C. Mut, Sr. Vice President-engineering and operations, Arco Oil & Gas Co.] to those who flatly state that the current gas glut is a demand-side phenomenon which has ended gas shortages for good. *See* 12 ENERGY USERS REP. (BNA) 407 (May 10, 1984) [Statement of James T. Jensen, President of Jensen Associates Inc.]; Tussing & Barlow, *A Survival Strategy for Gas Companies in the Post-OPEC Era*, Pub. Util. Fort. Feb. 3, 1983, 13-14.

[152]The American Gas Association reported that for 1983 additions to reserves exceeded production by 6 percent. For the past three years reserve additions have exceeded production about 7 percent. Excluding Prudhoe Bay, since the enactment of the NGPA, reserve additions have averaged 96 percent of production. For the period 1968-78, reserve additions averaged only 48 percent of production. 12 ENERGY USERS REP. (BNA) 449 (May 23, 1984).

[153]*Supra* note 151. In a recent report, Merrill Lynch predicted that natural gas shortages could occur as early as 1986 as the result of rising gas demands, lower drilling rates, and overestimates of deliverability from existing sources over the near future. Merrill Lynch expressed especial concern over the negative impacts on future deliverability of the high production rates in the Gulf of Mexico. 12 ENERGY USERS REP. (BNA) 224 (March 15, 1984).

[154]*See* NGPA Impacts *supra* note 6, at 19, 159.

permanently frozen at levels higher than the real prices of old interstate gas. Exacerbating this gas acquisition cost disparity is the fact that the NGPA deregulation mechanism on January 1, 1985 decontrolled more intrastate gas than interstate gas.[155]

The importance of this disparity in historic gas acquisition costs between intrastate pipelines and interstate pipelines lies in the prices each pipeline can pay for new gas supplies. Pipelines with the lowest acquisition costs on existing inventories can bid higher prices for new gas supplies and can still keep their burnertip prices at or below market clearing levels by using their lower gas inventory values to cushion the impact of their more expensive new supplies.[156] With their lower historic gas acquisition costs, interstate pipelines have, in fact, bid away a disproportionate share of new gas supplies from the intrastate pipelines,[157] leaving intrastate pipe-

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[155]It has been estimated by the Department of Energy that the percentage of intrastate gas that will be decontrolled under the NGPA equals 60% in 1985, 76% in 1987, and 88% in 1990. Comparable figures for the interstate market are 54% in 1985, 64% in 1987, and 75% in 1990. Off-system sales-Statement of Policy, 23 FERC ¶61, 140, at 61,315 n.21 (April 25, 1983) (Comm. Richard, concurring).

[156]*Id.* at 61,309, 61,313.

[157]Evidence of the bid-away problem in major intrastate markets was provided by Texas and Louisiana during congressional hearings on natural gas pricing policies in 1982. In Texas, the variance among intrastate pipelines in gas acquisition costs resulted in an average price differential of $1.68 per Mcf to $2.66 per Mcf in 1980. The Texas interstates also had variances among them, but at lower levels (49¢ per Mcf to $2.15 per Mcf). *Texas Energy and Natural Resources Advisory Council, Impact of the NGPA on Current and Projected Natural Gas Markets, in Natural Gas Issues (Pt. 1-Vol. 2): Hearings Before the Subcomm. on Fossil and Synthetic Fuels of the House Comm. on Energy & Commerce*, 97th Cong., 2d Sess. 1400, 1435 (1983) [hereinafter cited as *Texas NGPA Impact*]. The intrastate market in Texas is losing reserve position relative to the interstate market. Six major Texas intrastates supply more than 60% of the gas consumed in Texas, but have cumulative reserve additions equaling less than 50% of the state's total cumulative reserve additions. *Id.* at 1437. The reserve/production ratio of Texas intrastates has fallen steadily from 1978 to 1981 from 9.34 to 6.18. *Id.* The R/P ratio slippage is even greater for the Texas Gulf Coast Region over the same time period – 8.08 in 1978 to 4.74 in 1981. *Id.* at 1438. At current production levels, the U.S. as a whole in 1982 had 57 years of remaining supply as compared with 36 years for Texas and 29 years for Louisiana. *Id.*

Louisiana data show a similar profile for the Louisiana gas markets. In March of 1982, the cost of purchased gas averaged $3.45 per Mcf for Louisiana intrastates as compared with $2.64 per Mcf for Louisiana interstates. *Louisiana Department of Natural Resources, the Impact of the NGPA on Intrastate Markets in Louisiana, in Natural Gas Issues (Pt. 1-Vol. 2): Hearing Before the Subcomm. on Fossil and Synthetic Fuels of the House Comm. on Energy & Commerce*, 97th Cong., 2d Sess. 1136, 1172 (1983) [hereinafter cited as *La. NGPA Impacts*]. In 1980, the discrepancy in average cost of purchased gas between Louisiana intrastates and interstates was $2.60 per Mcf to $1.88 per Mcf. In 1981, the differential was $3.20 to $2.41 per Mcf. *Id.* at 1174-75. These price differentials are largely attributable to the differences in prices paid for old gas by the intrastates and interstates. As of March, 1982, the old gas acquisition cost differential was $2.75 per Mcf for the intrastatse as compared with $1.42 per Mcf for the interstates. *Id.* at 1176. The intrastates have had to bid primarily for deep gas primarily in their attempts to replace declining deliverability. As a consequence, they have lost much of their old gas cushions and are experiencing difficulty in outbidding interstates for additional gas supplies. *Id.* at 1177, 1183, 1187. Symptomatic

lines and their customers facing potential deliverability shortages. The bid-away problem is further compounded by the fact that the NGPA and the NGA provide greater access to all supplies of gas to interstate pipelines than they do to intrastate pipelines.[158]

VI. How Do You Spell R-E-L-I-E-F?

A. *The Competitive Brombide—An Introduction*

To deflate the gas bubble, blunt a price spike, and minimize economic dislocations, the nation must modify its natural gas practices, policies, and market structures. These policies and structures were established to protect investors and consumers during the gas industry's developmental phase and to avoid gas shortages at all costs during the turbulent 1970's. In this regard, the NEA has made important contributions to improving the nation's understanding of its natural gas policy problems by initiating enough price reform so that the truly great responsiveness to price of producers and consumers could be demonstrated. It is now particularly important for gas consumers, all segments of the gas supply system, and regulators to understand that it is no longer possible, much less desirable, for the natural gas market to be insulated from vigorous competition with alternative energy sources and conservation. Even gas-on-gas competition may now be desirable.

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of the intrastates' bidding difficulties is the decline of their share of total proved reserves in Louisiana from 41% in 1978 to 32% in 1980. *Id.* at 1159.

[158]*See supra* notes 25-27, 124-29 and accompanying text. Gas is interstate in nature if it is sold across state lines, dedicated to interstate commerce by a certificate of public convenience and necessity, or commingled with gas already in interstate commerce, *Texas NGPA Impact*, *supra* note 157, at 1447, unless such gas is sold under a Hinshaw exception or involves gas not dedicated to interstate commerce as of Nov. 8, 1978, and sold directly by an out-of-state producer to an intrastate pipeline or by an intrastate pipeline to an out-of-state end-user. *Id.* at 1449. Moreover, gas from the federal O.C.S. is by definition interstate gas. *Id.* at 1451. As a consequence, an intrastate pipeline can get access to non-exempt interstate gas only if (1) it is sold off-system pursuant to FERC off-system sale authority; (2) it has received an abandonment certificate under section 7 NGA proceedings, o; (3) in the case of contracts for new gas the original purchaser has exercised its right of first refusal. *Id.* at 1456-57. The Texas Energy and Natural Resources Advisory Council alleges that:

> [T]he F.E.R.C. has taken a very conservative approach to granting abandonments. The F.E.R.C., historically, has granted abandonments of facilities reaching fields which are no longer productive. Hence, dedicated fields are never again available as long-term supplies to the intrastate markets.
>
> Consistent with its NGPA authority, the F.E.R.C. has liberally endorsed off-system sales from the interstate market into the intrastate market. . . .
>
> As a result . . . of these two policies, the interstate market has had a dual advantage. By allowing surpluses to be sold into the intrastate market, the F.E.R.C. is provided a virtually penalty-free environment for interstate pipelines to hoard supplies. Interstates have bought available supplies at almost any price, paying no penalties for such inefficient buying behavior because short-term surpluses may

Competition at the burnertip is now unavoidable. With oil prices deregulated, producers of fuel oil are offering bargain prices to users who could potentially use multiple fuels in order to help reduce the oil deliverability surplus.[159] Energy users of all classes are finding energy conservation to be a good investment. Gas consuming businesses in international competition are limited to what they can pay for natural gas by the cost structures of their most efficient foreign competitors.[160]

B. *The Congressional Stalemate*

Because of the perceived problems within natural gas markets, which many attribute to the NEA, numerous revisions to the NEA have been proposed over the past two years. Like the shortage debates of the seventies, the legislative proposals range from national deregulation of all wellhead prices to total deregulation. However, unlike the debates of the seventies, natural gas contracting customs and pipeline regulation methods are also being critically examined.

(1) Moderating Prices

Those who are primarily concerned with the stickiness of natural gas burnertip prices and the potential price fly-up support the following proposals:

1. regulation of all gas wellhead prices or the continuation of the NGPA's phased deregulation;
2. declaration that indefinite price escalation and take-or-pay contract terms are void because they work against the public interest in having adequate gas supplies at reasonable prices; and
3. modification of NGA regulation of interstate pipelines so that pipeline purchased gas acquisition costs can be more strictly scrutinized.

Through these proposals, the price critics, primarily from nonproducing states, hope to keep natural gas wellhead and burnertip prices below market clearing levels, recapture lost industrial loads, force pipelines and producers to shoulder most of the risks inherent in dynamic energy markets,

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be sold in the off-system intrastate market when their markets collapse. *Id.* at 1457.

[159] *See Natural Gas Issues—(Pt. 1): Hearings Before the Subcomm. on Fossil and Synthetic Fuels of the House Comm. on Energy and Commerce*, 97th Cong., 2d Sess. 879-880 (1982) [hereinafter cited as Gas *Issues I*] (testimony of George H. Lawrence, Pres.—American Gas Association); *Natural Gas Issues—(Pt. 2): Hearings Before the Subcomm. on Fossil and Synthetic Fuels of the House Comm. on Energy and Commerce*, 97th Cong., 2d Sess. 173 (1982) [hereinafter cited as *Gas Issues II*] (statement of Ray J. Lynch—Pres. of Michigan Wisconsin Pipe Line Co.).

[160] This is especially true of the petro-chemical and refining industries that are heavily concentrated along the Texas and Louisiana Gulf Coast Regions. *See Texas NGPA Impacts, supra* note 157, 1406-10.

and prevent the producers of old gas from selling their supplies at market values above NGPA price ceilings.[161]

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[161]Most groups concerned with high natural gas prices oppose total decontrol achieved by deregulating gas not subject to decontrol under the NGPA. As one opponent put it, "In fact, what happens under deregulation is the dollars all flow to the South and the heat all flows to the North. Unfortunately, that heat is political heat and pricing heat and not the gas that we so sorely need at reasonable prices." *Economic Impact of Natural Gas Deregulation: Hearings Before the Subcomm. on Environment, Energy and Natural Resources of the House Comm. on Government Operations*, 97th Cong., 2d Sess. 57 (Feb. 4, 1982) [hereinafter cited as *Deregulation Impact*] (statement of Bernard M. Fox, V. Pres. and General Manager—Northeast Utilities). Groups sharing this viewpoint, include:

1. *Organized Labor*—which fears that natural gas deregulation will cause inflation, unemployment and taxes to increase and economic growth and governmental services to decreases. *See Economic Impact of Natural Gas Decontrol: Hearings Before the Subcomm. on Environment, Energy, and Natural Resources of the House Comm. on Government Operations*, 97th Cong., 2d Sess. 82-3 [hereinafter cited as *Decontrol Impacts*] (statement entitled AFL-CIO ISSUE ALERT! Natural Gas Deregulation: Another Oil Industry Swindle);
2. *Low-Income Lobbying Organizations*—who contend that increased energy prices produce disproportionately negative impact on low-income households, often resulting in them being unable to acquire gas in order to heat their homes and still be able to acquire other essential goods and services. Besides opposing decontrol, these groups lobby for increased funding of low-income weatherization and energy conversion programs. *See Deregulation Impact, supra* at 178-88 (statement of Toni Hurst, Project Director, Low-Income Energy Advocacy Project); *Decontrol Impact, supra* at 110-17 (Statement of Steven P. Hershey, Counsel for Action Alliance of Sr. Citizens, Association of Community Organizations for Reform Now, and the Tenant Action Group);
3. *General Consumer Advocacy Groups*—which contend that natural gas decontrol will cause unemployment to increase, massive transfers of wealth from energy-users to energy producers, and very little, if any, economic growth. As one group puts it, "with a massive transfer of wealth to gas producers, . . . the pie might get a little bigger, but even after 15 years only those who own gas related capital services . . . will be better off. Everyone else, . . . labor and owners of non-gas related capital services, would still be worse off after 15 years." *See Deregulation Impact, supra* at 127; *Id.* at 120-47 (Consumer Energy Council of America, Natural Gas Price Deregulation: A Case of Trickle Up Economics); *Id.* at 74-88 (Citizens/Labor Energy Coalition, Pipeline to Disaster: The Impact of Natural Gas Decontrol on American Jobs);
4. *Institutions of Higher Education*—which fear that high energy bills are handicapping their efforts to provide an affordable college education to American students, and ask that if deregulation occurs, Congress act to eliminate pass-through and price guarantees producers, transmission companies and distribution companies currently can use to impose high risks and high prices on end-users. *See Gas Issues I, supra* note 159, at 212-15 (Statement of Christopher Crittenden, Director-Higher Education Energy Task Force);
5. *Marginal Farmers*—which fear their production costs will rise at a time when their crop prices will not support any further expenditure increases. *See Gas Issues II, supra* note 159, at 817-20 (statement of Harold Wright, President—Indiana Farmers Union);
6. *Distribution Companies Served by Interstate Gas Supplies*—which fear accelerated load losses and bad debt write off losses should decontrol be accelerated by administrative decision or legislation. Distribution companies have also been extremely critical of pipeline-producer contracting practices, especially take-

(2) Avoiding the Bid-away

Those primarily concerned about the bid-away problem support proposals:

1. allowing the prices of all old gas categories to rise to new gas price ceiling levels or market clearing levels within the context of a program which decontrols all natural gas wellhead prices over a 2-3 year period, and
2. modifying current restrictions in the NGA and NGPA which prevent the free transfer of gas supplies among pipelines and between the intrastate and interstate markets.

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or-pay and indefinite pricing contract provisions, and the privileges permitting pipelines to flow through most of their purchased gas acquisition costs to distribution consumers. Distribution companies are also concerned with the level of funding for low income energy assistance programs. See Consumer Impact of NGPA and Proposals for Accelerated Decontrol of Wellhead Gas Prices, *reprinted* in *Gas Issues I, supra* note 159, at 39-57 (prepared statement of Stephen Schachman—Chair, Associated Gas Distributors; Pres. & C.E.O.—Philadelphia Gas Works); *Deregulation Impact, supra* at 57-8 (prepared statement of Bernard M. Fox—V. Pres. & Gen. Manager, Northeast Utilities);

7. *Interstate Transmission Companies*—which are primarily concerned about the impacts on end-user prices of indefinite price escalator and take-or-pay contract provisions. Interstate transmission companies have incurred large take-or-pay penalties and load losses. They generally recommend that legislation focus on remedying the problems created by producer contracts before accelerated decontrol is given any emphasis. Interstate transmission companies also support the preservation of purchased gas acquisition costs flow through, repeal of incremental pricing, repeal of the Powerplant and Industrial Fuel Use Act, enhanced government energy research funding. *See Gas Issues II, supra* note 159, at 8-36 (statement of Jerome J. McGrath—Pres., Interstate Natural Gas Association of America); *Gas Issues I, supra* note 159, at 868-913 (statement of George H. Lawrence—Pres., American Gas Association);
8. *States with Economies Heavily Reliant on Interstate Gas Supplies*—which fear that gas prices at the burnertip are already at the market-clearing level within their economies, a condition that could be exacerbated by accelerated decontrol. Most of these states feel that the NGPA has solved their shortage problems, so that decontrol of old gas will merely raise consumer prices without providing any corresponding supply benefits. These states deny that bidding disparities exist between them and intrastate markets, and therefore resist the decontrol of old gas as a way of eliminating bidding disparities. To the extent regional disparities exist, consuming states advocate their elimination by restricting or prohibiting the use of indefinite price escalators and take-or-pay contract requirements, restoring the prudency standard for judging the validity of pipelines purchased gas acquisition costs for pass-through purposes, encouraging liberalized off-system sales procedures, and increasing federal support for alternative energy research and low-income energy assistance program. See *Gas Issues I, supra* note 159, at 1231-58 (statement of Priscilla C. Grew—Commissioner, California Public Utilities Commission); *Id.* at 1296-1346 (statement of Christine A. Hansen—Commissioner, Iowa State Commerce Commission); *Id.* at 1280-92 (statement of Eric J. Schneidewind—Chair., Michigan Public Service Commission); *Id.* at 1223-25 (statement of Edward H. Hynes—Commissioner, New Jersey Board of Public Utilities); *Id.* at 1352-57 (statement of Willie J. Nunnery—Commissioner, Wisconsin Public Service Commission);

Proponents of these proposals, mostly located within the old intrastate markets, hope to eliminate the old gas cushion provided by the NGPA's vintaged price ceilings and partial decontrol mechanisms.[162] The equal accessibility proposals are designed to provide all purchasers with equal access to O.C.S. gas, gas subject to NGA abandonment certification proceedings, and gas subject to the NGPA's first right of refusal requirements.[163] The accessibility proposals would also alter the off-system sales policies of the FERC and state public utility commissions so that gas can

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Deregulation Impact, supra at 271-74 (statement of Bradford S. Chase—Acting Undersecretary for Energy, Connecticut Office of Policy and Management). Note also, producing states have not been without their own pricing concerns, mostly with respect to price increases attributable to indefinite price escalators. Oklahoma, Kansas, and New Mexico have passed legislation limiting the effects of indefinite price escalators. Oklahoma Natural Gas Price Protection Act, OKLA. STAT., tit. 52, §§ 260.1-260.13 (West Supp. 1984-85); Kansas Natural Gas Price Protection Act, KAN. STAT. ANN. §§ 55-1401 to 55-1455 (1983); New Mexico Natural Gas Pricing Act, N. M. STAT. ANN. §§ 62-7-11 to 62-7-23 (1978). The validity of state restrictions on indefinite price escalators in intrastate gas purchase contracts was upheld in Energy Reserves Group, Inc., v. Kansas Power & Light Co., 51 U.S.L.W. 4106 (1983). Moreover, a blue ribbon Texas energy policy panel has recommended that federal legislation be enacted to restrict the operation of indefinite price escalators and take-or-pay contract provisions. *See Texas NGPA Impacts, supra* note 157, at 1466-67.

[162]Proponents of Bid-away proposals include:

1. Organizations whose members are spread out all over the country and consequently face large disparities in prices of and accessibility to gas supplies. Such groups include the Council of Industrial Boiler Owners, *Gas Issues I, supra* note 157, at 83-98 (statement of Richard J. Bryan); the American Association of School Administrators, Id. at 194-209 (statement of J. Maxey Bacchus); the National Association of Manufacturers, *Id.* at 67-78 (statement of Gary S. Furman).
2. The Gulf Coast States of Texas and Louisiana, whose industries are heavily reliant on natural gas supplied by intrastate pipelines. *See Texas NGPA Impacts, supra* note 157; *La. NGPA Impact, supra* note 157.
3. Industries which must use natural gas as a feedstock and which are heavily concentrated within the Gulf Coast intrastate markets. A prime example is the chemical manufacturing industry, *see Gas Issues I, supra* note 159, at 405-500 (statement of James D. Beatty).
4. Intrastate pipelines, *See Gas Issues II, supra* note 159, at 281-305 (Statement of J. L. Terrill—Pres. Louisiana Intrastate Gas Corp.).
5. Interstate Pipelines experiencing gas supply and pricing problems, *see Natural Gas Contract Renegotiations and FERC Authorities: Hearings Before the Subcomm. on Fossil & Synthetic Fuls of the House Comm. on Energy & Commerce*, 98th Cong., 1st Sess. 434-50 (1983) [hereinafter cited as *Contract Hearings*] (Response of Tennessee Gas Transmission Co. by Jack H. Ray—Pres.).
6. Independent natural gas producers, *see Gas Issues II, supra* note 158, at 514-38 (statement of David W. Wilson—Pres., Association for Equal Access to Natural Gas Markets and Supplies); *Id.* at 542-54 (statement of Danny H. Conklin—Chair., Natural Gas Committee of Independent Petroleum Association of America).

[163]*Id.*

be freely transferred among pipelines and distribution companies.[164]

(3) Retaining Industrial Loads

To help pipelines and distribution companies retain the industrial loads, proposals have been made for:

1. eliminating the NGPA's incremental pricing mechanism, which establishes a rate setting policy that imposes higher rate burdens on industrial users;
2. repealing the PIFUA's restrictions on the present and future industrial use of gas; and
3. altering rate design methodologies so that transmission companies and distribution companies can quickly adapt their industrial rates on natural gas to meet changes in the prices of competitive fuels.

Sponsors believe these proposals will provide pipelines with the opportunity to retain industrial loads currently being lost to other energy sources through intense interfuel competition.[165] By preserving the indus-

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[164]*See Texas NGPA Impacts, supra* note 157, at 1442-57; *see also supra* note 158 and accompanying text.

[165]The case against incremental pricing has been well summarized by the American Gas Association (AGA), as follows:

> Incremental pricing was intended to send "market signals" to producers from non-exempt users so as to restrain wellhead price increases. These market signals do not occur, however, because the system operates to charge non-exempt end-users the maximum rate *regardless* of what prices are bid at the wellhead. In part this is because most states have raised non-exempt end-users rates to the maximum level as part of normal state ratemaking procedures. There is, therefore, no capability to increase non-exempt end-user rates through incremental pricing.
>
> . . .
>
> The second factor leading to the failure of incremental pricing – and a large part of the reason the system acts to charge non-exempt users the maximum rate regardless of wellhead price bids – is that the surcharge is too great to be absorbed by non-exempt end-users. . . .

Gas Issues I, supra note 159, at 868, 883-84 (statement of George H. Lawrence – Pres., American Gas Association) (emphasis added).

As to the Powerplant and Industrial Fuel Use Act, the AGA states that:

> The industrial market is, however, the gas utility industry's major potential source of growth – and the FUA blocks gas competition. This market distortion is unnecessary in light of gas availability and, therefore we recommend modification of FUA to allow gas to be burned in new industrial facilities.

Id. at 885.

An overall summary of the case against these gas marketing restrictions was provided in the testimony of the Colorado Interstate Gas Co., as follows:

> The prohibitions against gas use in the Fuel Use Act and the incremental pricing provisions of Title II of the NGPA are out of tune with the *demand-limited nature* of our business and unnecessarily restrict the economic use of gas.

Gas Issues II, supra note 159, at 37, 41 (Statement of Peter J. King, Jr., – Pres., Colorado Interstate Gas Co.,) (emphasis added).

The rate flexibility issue boils down to the fact that

trial loads of transmission and distribution companies, these proposals will enable residential users to avoid the fixed cost expense they would have to bear in the absence of the industrial load.[166] The removal of industrial gas use restrictions and prohibitions may give producers an expanded market sufficient to take up the current deliverability slack now depressing gas drilling rates.[167]

These proposals are more sectoral than sectionalist in orientation. Support for them comes primarily from pipelines and distribution companies anxious to retain their industrial loads[168] and from large industrial boiler fuel users who wish to take advantage of the current stiff competition among fuels used by industrial customers.[169] However, in their search for ways to dissipate the current gas glut, producers have made the repeal of incremental pricing and the PIFUA top legislative priorities.[170] Opposition to these proposals comes largely from organized consumer lobbying groups, which fear that the residential ratepayer is a captive customer who will be forced to subsidize industrial users if these proposals prevail.[171]

> [P]ipelines . . . can propose virtually any rate structure [they] feel appropriate. The process of review and approval, however, is often long and arduous, so it has been difficult for the industry to be responsive to certain market competition in a timely manner (e.g. dump prices for residual fuel oil). We believe that rate structures and filing procedures which are flexible and timely to meet changing market conditions are necessary. If they do not have the flexibility to meet competitive conditions, particularly in the industrial sector, pipelines and distributors will unnecessarily lose loads, and rates charged to residential and commercial customers would be forced up as a consequence.

Gas Issues II, supra note 159, at 167, 174-75 (statement of Ray J. Lynch—Pres., Michigan-Wisconsin Pipe Line Co.).

[166]*Id.*

[167]*See Gas Issues II, supra* note 159, at 357, 386 (statement of Nicholas J. Bush—Pres., Natural Gas Supply Association); *Id.* at 542, 543-44 (statement of Danny H. Conklin—Chair., Natural Gas Committee of Independent Petroleum Association of America).

[168]*See Gas Issues I, supra* note 159, at 819-52 (statement of Stephen Schachman—Chair., Associated Gas Distributors); *Id.* at 868-913 (statement of George H. Lawrence—Pres., American Gas Association); *Gas Issues II, supra* note 159, at 8-36 (statement of Jerome J. McGrath—Pres., Interstate Natural Gas Association of America); *Id.* at 37-48 (statement of Peter J. King, Jr.—Pres., Colorado Interstate Gas Co.); *Id.* at 167-89 (statement of Ray J. Lynch—Pres., Michigan Wisconsin Pipe Line Co.); *Contract Hearings, supra* note 162, at 161-78 (written statement of El Paso Natural Gas Co.); *Id.* at 434-50 (statement of Jack H. Ray—Pres., Tennessee Gas Transmission); *Deregulation Impacts, supra* note 161, at 137-58 (statement of Thomas M. Matthews—V. Pres., Tennessee Gas Transmission).

[169]*See Gas Issues I, supra* note 159, at 67-78 (statement of Gary S. Furman on behalf of the National Association of Manufacturers); *Id.* at 83-98 (statement of Richard J. Bryan on behalf of Council of Industrial Boiler Owners); *Id.* at 405-20 (statement of James D. Beatty on behalf of the Chemical Manufacturers Association).

[170]*See supra* note 167.

[171]The cases of Consumer Energy Council of America v. Federal Energy Regulatory Comm'n, 673 F.2d 425 (D.C. Cir. 1982), *aff'd sub nom.* Process Gas Consumers Group v. Consumer Energy Council of America, 77 L. Ed.2d 1402 (1983) (Consumer constitutional attacks on the legislative veto of the FERC's incremental pricing Phase II order sustained), and Ohio Ass'n of Community Action Agencies v. Federal Energy Regulatory Comm'n, 654 F.2d 811

In terms of sectionalism, the producing states, which are among the states most heavily dependent on natural gas as a fuel for their industrial and electrical power generation sectors,[172] strongly supported plans to help industrial and power generation users have greater access to natural gas supplies.[173]

The industrial states of the north central region are also heavily dependent on natural gas as an industrial fuel.[174] Therefore, the north central region, as it should, provides strong support for industrial load saving proposals.[175] However, many of these same states are among the most dependent on natural gas for residential uses.[176] Due to this concern for both industrial and residential ratepayers, the north central region has not supported attempts by southwestern states to exempt electric power plants from the PIFUA's restrictions on gas usage in new power plants.[177]

(4) Avoiding Gas Shortages

Future gas supply concerns have been addressed by proposals which

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(D.C. Cir 1981) (Consumer challenge to the FERC's authority to exempt industrial users from incremental pricing surcharges that would raise their delivered prices above those of fuel oil no. 6 rebuffed) illustrate organized consumer action groups' opposition to cutbacks in the NGPA's incremental pricing system. Senator Bumpers of Arkansas, in recent Senate hearings on proposed natural gas legislation, stated his opposition to repeal of the Powerplant and Industrial Fuel Use Act's restrictions on gas use by saying: "this bill repeals that part of the Fuel Use Act that restricts the use of natural gas to premium uses, which I have always strongly favored." *Natural Gas Legislation: Hearings Before the Senate Comm. on Energy and Natural Resources*, 98th Cong., 1st Sess. 87 (1983). By premium uses, Senator Bumpers refers to the high priority uses consistently protected by FPC, FERC and Congressional natural gas curtailment policies. *See supra* notes 47-50, 120-22 and accompanying text.

[172]*Supra* notes 72 and 104. The gas producing states of Louisiana, Oklahoma and Texas were all over 65% dependent on natural gas to fuel electric power generation fuel as of 1980. *See* STATE ENERGY DATA REPORT, STATISTICAL TABLES AND TECHNICAL DOCUMENTS, ANNUAL July, 1982 (DOE/EIA-3164-39) [hereinafter cited as STATE DATA].

[173]*Supra* notes 72 & 104, 11 ENERGY USERS REP. (BNA) 756 (July 28, 1983).

[174]The industrial sectors of 10 north central states are at least 19% dependent upon natural gas as a fuel source, causing them to be ranked among the nation's 26 most gas dependent industrial sectors. These states, listed by rank and percentage dependent, include: Nebraska (8th–29.89%), Iowa (10th–28.4%), Wisconsin (11th–28.15%), Michigan (14th–25.79%), Illinois (15th–25.1%), Minnesota (18th–22.69%), Missouri (22nd–20.49%), Pennsylvania (24th–19.24%), Indiana (25th–19.04%), Ohio (26th–19.03%). STATE DATA, *supra* note 172.

[175]The vote on H.R. 655 to veto the FERC's Phase II of incremental pricing passed by a vote of 370 to 34. Of the 34 negative votes, 10 came from New York, 7 from California, 3 each from Massachusetts and New Jersey, 2 each from Connecticut, Illinois and Ohio, and 1 each from Maryland, Minnesota, Oregon, Rhode Island and West Virginia. 126 CONG. REC. H3855 (1980). *See also* 11 ENERGY USERS REP. (BNA) 756 (July 28, 1985).

[176]The residential sectors of 10 north central states are at least 33% dependent on natural gas as a fuel source, causing them to rank among the nation's 16 most gas dependent residential sectors. By rank and percentage these 10 states are: Illinois (2d–54.57%), Michigan (3d –54.11%), Ohio (6th–46.56%), Nebraska (9th–39.14%), Indiana (10th–37%), Missouri (12th–36.09%), Iowa (13th–35.8%), Wisconsin (14th–35.75%), Minnesota (15th–35.66%), and Pennsylvania (16th–33.97%). STATE DATA, *supra* note 172.

[177]*See* 11 ENERGY USERS REP. (BNA) 756 (July 28, 1983).

would: (1) decontrol all categories of natural gas over a short phase-out period; (2) eliminate the NGPA's incremental pricing provisions; (3) repeal the PIFUA; and (4) facilitate direct sales of gas between producers and industrial users by requiring pipelines to act as contract carriers.

These proposals focus on promoting the efficiency of natural gas production and consumption.[178] The decontrol proposals are designed to permit producers to maximize their sales revenues by engaging in drilling operations that produce the most hydrocarbons at the lowest possible cost rather than by matching drilling operations with the characteristics of various statutory wellhead pricing categories in order to qualify for the highest possible ceiling prices.[179] The other proposals are designed to insure that producers are allowed to sell gas to anyone who can pay for it and to insure that the markets in which gas is sold are defined by price com-

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[178]Among the groups most concerned about efficiency as a natural gas policy goal are:

(1) *producers* of varying sizes. *See Gas Issues II, supra* note 159, at 375-60 (statement of Nicholas J. Bush—Pres., Natural Gas Supply Association); *Id.* at 403, 404, 406-08, 417-19 (statement of Perry O. Barber, Jr. on behalf of the Domestic Petroleum Council);

(2) *Large end-users* in geographically widespread industries. *See Gas Issues I, supra* note 159, at 67, 77-8 (statement of Gary S. Furman on behalf of the National Association of Manufacturers); *Id.* at 83, 86-88, 95 (statement of Richard J. Bryan on behalf of the Council of Industrial Boiler Owners); *Id.* at 405, 407, 411-12 (statement of James D. Beatty on behalf of the Chemical Manufacturers Association);

(3) *non-marginal farmers. See Gas Issues II, supra* note 159, at 814-16 (statement of James Barnett—Director, Natural Resources Dept. of Indiana Farm Bureau, Inc.).

[179]As one Congressional testifier has eloquently stated:

> Reliance upon the marketplace results in the efficient and methodical exploration for production of natural gas resources. Producers will direct their efforts toward exploration for natural gas which can be produced and marketed for a profit at the prevailing market price. Geologists, geophysicists, and other industry experts will evaluate individual prospects for exploration dollars on the basis of maximizing production and reserves discoveries for each dollar expended (more "bang for the buck"), without having to fit their decisions into the pricing pigeonholes created by the NGPA. Gas which cannot be sold for a profit at that price will not be produced, and producers will not endeavor to discover gas unmarketable at current prices, nor should they, for if consumers need more expensive supplies the market price would increase to elicit them.
>
> Resources expended in the search for the production—or importation—of uneconomic gas supplies are unwisely spent. If such gas is successfully marketed, through externally imposed distortions, consumers are penalized to the extent that the price exceeds the value really placed upon the commodity. In short, free-market-generated incentives encourage natural gas producers to perform each function, including exploration, at an optimum level determined by consumer preferences. The market is able to adjust rapidly to changing supply and demand conditions, while a legislative or regulatory framework cannot make these adjustments so timely or efficiently. *Gas Issues II, supra* note 159, at 359-96 (statement of Nicholas J. Bush—Pres., Natural Gas Supply Association).

Accord Gas Issues II, supra note 159, at 406-07, 417-18 (statement of Perry O. Barber, Jr. on behalf of the Domestic Petroleum Council).

petition instead of legislative and institutional restrictions on natural gas uses.[180]

Needless to say, this package of proposals receives heavy support from producing states.[181] Yet, even among producing states, the deregulation proposals are getting mixed reviews. The same states which favor federal natural gas deregulation have taken legislative and administrative steps to insulate their consumers from some of the impacts of phased deregulation under the NGPA.[182]

To date, no mix of these proposals has attracted the consensus necessary for Congress to enact modifications in the NEA's natural gas policies.[183] As a result, the private sector and state and federal regulatory agencies have been interacting on an ad hoc basis to improvise relief from gas bubble distress.

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[180]*See generally supra* notes 157-58 for a discussion of restrictions impeding intrastate pipelines' access to old interstate gas supplies and new gas supplies. General limitations on the free flow of gas include:

a. abandonment certification and first right of refusal requirements applicable to the transferability of gas supplies dedicated to interstate commerce. *See supra* note 158; *Gas Issues II, supra* note 159, at 291-93 (testimony of J. L. Terrill—Pres. of Louisiana Intrastate Gas Corp.).
b. the bid-away problems caused by the practice of vintaging gas prices prior to the enactment of the NGPA, thereby creating bidding difficulties for pipelines currently lacking an old interstate gas cushion. *See supra* notes 154-58.
c. restrictions on industrial and power plant gas use imposed by the Powerplant and Industrial Fuel Use Act, which are opposed on grounds that gas is now demand-limited, not supply-limited, and should be allowed to flow to any purchaser willing to pay for it. *See Gas Issues I, supra* note 156, at 578 (statement of John Johnson on behalf of the Petrochemical Energy Group); *Id.* at 419 (statement of James D. Beatty on behalf of the Chemical Manufacturers Association).
d. the industrial pricing disadvantages imposed by the incremental pricing provisions of the NGPA, which are opposed as being discriminatory and ineffective market ordering devices. *See Gas Issues I,* supra note 159, at 227 (American Meat Institute White Paper on Natural Gas Deregulation); *Id.* at 88-92 (statement of Richard J. Bryan on behalf of the Council of Industrial Boiler Owners).

[181]*See* 11 ENERGY USERS REP. (BNA) 799 (Aug. 1, 1983); *Id.* at 755-56 (July 28, 1983).

[182]Most notably, Kansas, Oklahoma, and New Mexico have passed statutes limiting the pricing effects of indefinite price escalation clauses in old intrastate gas contracts. Oklahoma Natural Gas Price Protection Act, OKLA. STAT. tit. 52, §§ 260.1-260.13 (West Supp. 1984-85); Kansas Natural Gas Price Protection Act, KAN. STAT. ANN. §§ 55-1401 to 55-1455 (1983); New Mexico Natural Gas Pricing Act, N.M. STAT. ANN. §§ 62-7-11 to 62-7-23 (1978). *See also* Energy Reserves Group, Inc. v. The Kansas Power and Light Co., 51 U.S.L.W. 4106 (U.S. Jan. 24, 1983).

[183]On July 26, 1983, the Senate Energy Committee voted to send a deregulation bill to the Senate floor which would have decontrolled immediately all gas sold under contracts entered into after the passage of the act, natural gas sold under contracts renegotiated after the date of enactment if the new renegotiated contract permits a deregulated price, and gas released by pipelines through their exercise of a statutory take-or-pay reduction mechanism. The bill would have deregulated all gas supplies over a 44-month phaseout during which high priced gas would be subject to a 12 month rampdown price mechanism designed to reduce their prices to a Free Market Price Indicator, low priced gas would be subject to a 36 month ramp-up price mechanism designed to raise their prices to the Free Market Price

C. *Producer Curtailments*

Pipelines can lower their gas acquisition costs by curtailing their gas purchases under selected contracts. In effect, this cost reduction measure amounts to producer curtailment. The pipelines' goal in curtailing producers is to reduce their current take-or-pay obligations without endangering their long term gas supply positions.

Balancing short term cost reduction goals with long term supply concerns is not an easy task. The ideal contract to curtail is one involving high prices, no specific take obligation, and gas supplies subject to the FERC's NGA abandonment authority. Such contracts can be curtailed without much fear that the producer will be able legally to sell his gas to another buyer. Unfortunately, this ideal contract is rare.

Most contracts subject to the NGA abandonment jurisdiction have low price terms, while many of the high price contracts contain high take-or-pay obligations and involve supplies which the producer is free to sell to others if the current purchaser refuses to honor its terms.[184] As a consequence, perverse curtailment profiles have developed as pipelines have curtailed low-cost gas subject to NGA abandonment regulation in order to be able to honor the take obligations in their high cost gas contracts.[185]

Indicator, then all gas would be controlled at the Free Market Price Indicator for 6 months prior to deregulation. The bill also provided for a unilateral market-out provision, reimposition of the prudency standard for judging the validity of interstate pipeline gas acquisition costs for pass-through purposes, repeal of incremental pricing, and repeal of most of the Powerplant and Industrial Fuel Use Act restrictions on natural gas uses. *See* 11 ENERGY USERS REP. (BNA) at 755, 769-770 (July 28, 1983). This bill proved to be the highwater mark of efforts to achieve a total decontrol of natural gas wellhead prices.

In the House, the House Committee on Energy and Commerce passed a bill that not only would have kept price controls on old gas, but also would have frozen incentive price ceilings through Dec. 31, 1984, limited ceiling price escalations to the inflation rate for gas not decontrolled after Jan. 1, 1985, and capped prices obtained through indefinite price escalators at their Dec. 31, 1984, level for gas sold under existing contracts that have not been renegotiated. 12 ENERGY USERS REP. (BNA) 335-36 (April 19, 1984). Neither house managed to pass a new natural gas bill by the time Congress recessed for the 1984 elections.

[184]For example, ceiling prices covering new gas and new onshore well gas are $3.774 per MMBTU and $2.925 per MMBTU respectively while the ceiling prices on old interstate natural gas range from $0.30 to $2.421 per MMBTU. 18 C.F.R. § 271.101(a), 49 Fed. Reg. 30297 (1984). Moreover, the pre-1974 vintages have a maximum ceiling price of only $2.051. *Id.* While it is true that the weighted average take requirements of contracts entered into from 1973 through 1979 have ranged between 82.3% to 85.9%, as compared to 59.6% for pre-1973 contracts and 78.3% for post-1979 contracts, *see* DOE NGPA Report, *supra* note 138, at 3-3, it is also true that the later vintaged contracts' take-or-pay requirements are only slightly below that of the older vintages, are not subject to the NGA abandonment requirements and generally command a much higher price. In early 1983, the average cost of acquisition for interstate pipelines by category were $3.65 per Mcf for new gas and $3.08 per Mcf for new onshore well gas as compared to a range of $0.55 to $2.39 per Mcf for old interstate gas. FOSTER ASSOCIATES INC., TREND IN NATURAL GAS PURCHASES BY NGPA CATEGORY 9 (1983) [hereinafter cited as NGPA PURCHASES].

[185]This perversity was documented in a recent DOE study, which found that:

> Take-or-pay provisions provide pipeline companies with an incentive to reduce

When this relief has not been enough, pipelines have unilaterally abrogated some of their most expensive contracts in hopes that any expenses incurred as a result of contract damage actions will be less than the expenses they would have incurred in honoring the abrogated contracts.[186]

Producer states' enforcement of their oil and gas conservation laws can aid or impede pipelines' efforts to reduce their gas acquisition costs. If states reduce their allowable production rates, they also lower the volumes of gas producers can legally deliver to their purchasers, thereby effectively lowering purchaser take requirements.[187] However, producing states also use their conservation authority to promote the maximum recovery of minerals and to allocate equitably the benefits of mineral production among owners of mineral rights in common pools.[188] Both the maximum

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takes of low cost gas in periods of slack demand and to maintain minimum required takes of high-cost gas. The reduced takes of low-cost gas occur because total prepayments are lower when higher cost gas is taken and prepayments are made only on lower cost gas. . . . Between mid-1982 and mid-1983, old gas [purchases] declined at a high rate. The normal depletion rate of an old gas well is about 12 percent per year. . . . [T]he rate of decline in old gas purchases was 26 percent between mid-1982 and mid-1983. During the same period, projected purchases of new gas increased and declined while purchases of high-cost gas were projected to increase throughout the period.

DOE NGPA Report, *supra* note 138, at 3-4, 3-5.

[186]*Supra* note 141.

[187]*See* Memorandum of Patrick H. Martin, Louisiana Commissioner of Conservation, (June 2, 1983) (discussing use of producer nominations for establishment of allowables under order 29-F).

[188]The producing states attempt to balance their legitimate concern for assuring a maximum recovery of their mineral resources with treating equitably all who own a right to develop minerals. State conservation practices restrain the practical effects of the Rule of Capture, a rule of mineral ownership that dominated the early history of the oil and gas industry, which holds that persons own only the minerals they reduce to their dominion and control and that persons have the right to capture as many units as they can, even if they drain their neighbors' properties of minerals. Needless to say, when allowed to operate unabated, the Rule of Capture gives mineral owners incentives to extract minerals as rapidly as possible to avoid losing them to their neighbors. This rapid extraction creates physical and economic waste. Physical waste occurs because rapid extraction may dissipate reservoir pressures that would permit a greater total recovery of minerals if the reservoir were drained at a more leisurely rate, and because once extracted, minerals may be lost through evaporation, dissipation, or uneconomic uses if the total supply exceeds reasonable demands. Economic waste results from the diminishment of the discounted cash flow that would be possible if maximum efficient recovery of the minerals were achieved and if minerals were developed at the lowest possible extraction costs and sold at prices high enough to insure that the minerals were consumed efficiently.

The major tools developed by producing states to achieve maximum efficient recovery of their minerals are well spacing rules, compulsory unitization, production prorationing, and compulsory pooling. Well spacing rules control the density of development wells permitted to penetrate producing formations. The goal of these rules is to insure that a maximum efficient recovery of minerals is achieved at the lowest possible extraction costs. This is accomplished by the state determining from the geological characteristics of the producing formation and current economic conditions how much acreage a single well can efficiently drain, and then issuing spacing rules to insure that each well drilled has the opportu-

recovery and equitable allocation goals may require producer states to enforce common purchaser (ratable take) laws in ways that limit interstate pipelines' abilities to lower their gas acquisition costs by curtailing producers.[189] The potential clash between state conservation goals and the moderating of interstate gas acquisition costs has assumed a constitu-

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nity to drain an efficient number of acres without interference from other wells. *See* El Paso Natural Gas Co. v. Corporation Comm'n, 640 P.2d 1336 (Okla. 1981).

Compulsory unitization enables producing states to insure that each common pool is produced through extraction strategies most likely to achieve maximum efficient recovery of the minerals in the pool. Often, the mineral rights to a common mineral pool are owned by several persons. Yet, the recovery strategies most likely to effect maximum efficient recovery may require that the common pool be developed as it would be if only one person owned the mineral rights to it. Such development strategies usually dictate that some mineral tracts be declared unsuitable as a location for development wells or selected for the location of facilities that support the operations of development wells on other tracts. Compulsory unitization enables the state to order that a common pool be developed with the most efficient extraction strategies and that all mineral owners share equitably in the benefits of the development even if their tracts are not the sites of development wells or supporting facilities. *See* 6 H. WILLIAMS AND C. MEYERS, OIL AND GAS LAW §§ 901, 910, 912-13.2 (1984).

Production prorationing enables producing states to control the rate of production of minerals from their producing reservoirs to those levels which will not cause excessive production declines or losses of reservoir energy in times of high consumptive demands, and to allocate equitably the right to produce minerals to meet efficient consumptive demands during times when the efficient consumptive demands are less than the total amount producers could produce in the aggregate if they produced at the rate of maximum efficient recovery. In times of high demand, prorationing obviously prevents physical waste. In times of low demand, prorationing helps maintain an orderly production environment by stabilizing prices and assuring producers of a fair share of the available market. Some physical waste may be alleviated by prorationing during times of low demands to the extent that it prevents either production losses inherent in evaporation of minerals in post-production storage or losses in reservoir energy attributable to imbalanced production within a common pool that could occur if only a few of many wells within the pool are able to produce. *See* Erickson, *Crude Oil Prices, Drilling Incentives and the Supply of New Discoveries*, 10 Nat. Resources J. 27 (1970).

Compulsory pooling economically integrates the mineral interests in tracts of land smaller than the spacing units that cover them. This integration permits all mineral owners of tracts covered by a spacing unit to share in the revenues produced from the spacing unit's allowable development wells even though development wells are not located on all the tracts. This forced integration of economic interests prevents spacing rules from effectively taking the value of a small tract owner's mineral interest. Therefore, through compulsory pooling producing states insulate their spacing rules from due process attacks. *See* 6 H. WILLIAMS AND C. MEYERS, OIL AND GAS LAW § 905.1 (1984).

[189]Common purchaser (ratable take) statutes help meet producing states' conservation and equity goals by specifying how mineral purchasers shall apportion their demands for minerals among available producers during times when total market demands for minerals are less than the aggregate supply of minerals that would be produced if producers produced at the maximum efficient rate of recovery. Typically, the ratable take statutes and rules specify that purchasers shall buy first from wells with characteristics that would cause waste if they were produced below a certain rate of production. These wells include wells producing casinghead gas, and certain distressed wells which must be operated at maximum capacity in the interest of public safety. After these special needs are met, purchasers are required to satisfy their remaining demands by purchasing in a non-discriminatory proportionate manner from all producers within the fields from which they are buying minerals. *See* Okla.

tional posture, with the FERC and some interstate gas purchasers contending that the producing states' imposition of their conservation laws on wells supplying gas to interstate commerce is unconstitutional.[190]

D. *Contract Renegotiation*

Contract renegotiation, where possible, is a less divisive way of reducing pipeline take-or-pay obligations and gas acquisition costs. Such renegotiations can lower gas prices at the burnertip, causing an increase in gas sales as the gas industry reclaims customers lost to other fuels and makes more sales to current customers. Producers can benefit as well, if their percentage gain in current or future sales is greater than the percentage decrease in their contract prices.

Unfortunately, producers and pipelines face significant barriers to successful renegotiation of their contracts. Highly leveraged small producers may not be able to survive if their cash flows are interrupted or reduced even for a short period of time.[191] Some producers compete for end-use

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Corp. Comm'n O&G Ruling 1-305 (January 1, 1984).

The proportionate purchase requirement serves producing states' equity goals by insulating a producer who would not have a market in absence of ratable taking from the drainage of his minerals to producers who enjoy a greater market outlet for their production. *See* Northern Natural Gas Co. v. State Corp. Comm'n of Kansas, 372 U.S. 84, 88-9 (1963). Proportionate purchase requirements may also serve conservation goals to the extent that unbalanced production can cause a loss in reservoir energy. However, if a pipeline purchaser is required to take ratably from all available suppliers or sources, it loses the freedom to comply with its obligations or to exercise fully its rights under contracts it entered into with producers in order to balance its cost of acquisition goals with its long term supply requirements. *Id.* at 87-89.

[190]In Northern Natural Gas Co. v. State Corp. Comm'n of Kansas, 372 U.S. 84 (1963), the U.S. Supreme Court ruled that the application of Kansas' ratable take laws to the purchasing practices of an interstate pipeline unconstitutionally invaded the jurisdiction of the Federal Power Commission to regulate interstate pipeline purchasing practices under the Natural Gas Act, because such an invasion encroached upon a federally preempted regulatory domain. *Id.* 89-96. However, the rationale of *Northern Natural Gas* is once again under challenge by producing states. *See* Inquiry into Purchasing Practices of Interstate Pipelines, 48 Fed. Reg. 25, 264 (1983). Recently, the state of Mississippi ruled that its ratable take provisions could constitutionally be applied to interstate pipelines with respect to purchases of natural gas decontrolled under the provisions of the NGPA. Transcontinental Gas Pipe Line Corp. v. State Oil and Gas Board, 457 So.2d 1298 (Miss. 1984) [hereinafter referred to as *Transco*]. In its *Transco* opinion the Mississippi Supreme Court held that the NGPA provisions dealing with deregulated gas have removed the purchases of deregulated gas from the pervasive regulation of the federal government. As a consequence, the preemption rationale relied on in Northern Natural Gas is inapplicable to state ratable take statutes and rules as they are applied to interstate pipeline purchases of deregulated gas supplies. *Id.* at 1318. The Mississippi court also ruled that ratable take limitations on interstate pipeline purchasing powers did not impose impermissible burdens on interstate commerce. *Id.* at 1321-22.

[191]During congressional hearings on natural gas issues, one representative of independent producers noted that:

> Independents, unlike many larger companies, do not have substantial financial

sales with the pipelines that purchase their gas, and therefore are reluctant to improve the pipelines' competitive positions through contract renegotiation.[192] Free rider problems are pervasive, because no producer wants to provide relief unless all of the producers that sell to the pipeline provide a fair share of the relief.[193] Antitrust laws may prevent producers and their gas suppliers from negotiating equitable gas acquisition cost reduction packages.[194] Producers also must consider the impact which renegotiation may have on persons holding non-executive mineral interests in the subject wells.[195] Lessors and non-executive mineral owners, espe-

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> reserves. Therefore, day to day cash flow requirements are crucial to staying in business. Curtailed gas wells resulting in curtailed cash flow represent one of the largest single reasons forcing independents out of business.

Gas Issues II, supra note 159, at 544 (testimony of Danny H. Conklin – Chair, Natural Gas Committee of the Independent Petroleum Association of America). A large producer submitted a paper to Congress on take-or-pay problems which noted that:

> [A] producer, especially a small producer, needs a steady income from his wells in order to pay his fixed costs, operating costs, and taxes. In many instances, the steady income from existing production provides the collateral on which a producer borrows money to continue to drill wells to explore for and develop new gas.

Contract Hearings, supra note 162, at 525 (paper submitted by Stuart C. Mut – Sr. V.P., Arco Oil and Gas Co.).

[192]During the late 1982 and on into 1983, Amoco Production Co. and Northwest Central Pipeline Corp. engaged in a particularly bitter contract renegotiation which spilled over into congressional testimony. A part of that testimony, cited in a letter from Amoco to Congress, sharply noted Northwest's complaint that:

> We are contracted to buy $6.80 gas from Amoco in Wyoming – shutting in 80 cent gas in Hugoton – because we have to buy the Amoco gas, and we are competing with Amoco fuel oil in the Kansas City area and we are not competitive.

Contract Hearings; supra note 162, at 285 (letter from Bryan C. Edwards, V.P. Gas Sales – Amoco Production Co. to Cong. Sharp).

[193]For example, during renegotiations with Northwest Central Pipeline Corp., Amoco Production Co. expressed its reluctance to renegotiate because:

> [W]e have yet to receive your overall plan for systemwide operating revisions, involving all your suppliers which are within your control, nor any procedure for balancing any required relief equitably among all your producer and pipeline suppliers. This information is necessary before Amoco can reasonably determine the extent to which relief may be justified.

Contract Hearings, supra note 162, at 215 (letter from A. P. Payne, Regional Gas Sales Manager of Amoco Production Co. to Northwest Central Pipeline Corp. – Jan. 28, 1983).

[194]As noted by one producer representative, "Producers have and are continuing to enter into contracts without a clear idea of the competitive market for their production. This occurs because of fear of antitrust implications of exchanging information." *Gas Issues II, supra* note 159, at 528 (statement of Davis W. Wilson – Pres. Association for Equal Access to natural Gas Markets and Supplies). Exchanges of price information for purposes seemingly as beneficial as exchanges to facilitate contract renegotiation have been declared antitrust violations. United States v. Container Corp., 393 U.S. 333, 336-37 (1969).

[195]The duty owed non-executive mineral interest owners by executives has been described as follows:

> The executive is required to exercise his exclusive leasing power in the same manner as an ordinary, prudent land owner would exercise the leasing power inher-

cially royalty owners, may be entitled to payments based on factors other than cash flows achieved through the renegotiated contracts.[196] Finally, the large number of contracts that must be dealt with dictates that much time must be spent renegotiating before significant relief will be felt at the burnertip.[197]

E. *Renegotiation Coercion – Contract Impairment*

Consumers, distribution companies, and some pipelines have been and are seeking legislative and administrative price rollbacks, escalation clause

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> ent in the mineral fee. The executive's conduct will be judged by such standard as if no royalty or non-executive mineral interest were outstanding. . . . If the conduct of the executive satisfies the normal, prudent land owner's standard, the fact that the non-executive owner has been harmed is not actionable under this view. But if an ordinary, prudent land owner, not burdened by an outstanding non-executive interest would have acted differently, then the executive's conduct is actionable if it causes harm. We believe this standard fairly effectuates the intent of the parties; it does not require more than can be expected of ordinary land owners and does not permit less, especially where the "less," is due to the executive's effort to profit at the expense of the royalty or non-executive mineral owner.

2 H. WILLIAMS AND C. MEYERS, OIL AND GAS LAW § 339.2 (1981), *cited with approval in* J. M. Huber Corp. v. Square Enterprises, Inc. 645 S.W.2d 410, 415 (Tenn. Ct. App. 1982). Executive interest owners may be required to enforce implied lease covenants in favor of non-executive interest owners to the extent that the non-executive interest owners lack standing to enforce implied lease covenants directly against lessees. 2 H. WILLIAMS AND C. MEYERS, OIL AND GAS LAW § 339.3(5) (1981). An implied covenant that might be violated by a lessee or an executive interest owner renegotiating a gas purchase contract so as to reduce its cash flow level or security under circumstances where the gas purchaser could only obtain such concessions through the voluntary give-backs of the gas seller is the implied covenant to market, which is violated whenever the person having the power to make gas sales fails to secure the best terms available for the gas. *See* Amoco Production Co. v. First Baptist Church of Pyote, 579 S.W.2d 280 (Tex. Civ. App. – 1979, writ ref'd n.r.e.) Under such circumstances a court could conclude that the best terms available for the gas were those embodied in the original contract, and that the lessee or executive interest owner gratuitously gave up the advantage of those terms through renegotiation. *See id.*

[196] *See* authorities cited *supra*. In congressional hearings, producers cited their potential liability to royalty owners as a renegotiation stumbling block. The Getty testifier stated:

> [A]s a producer, Getty must consider the potential liability we have to a royalty owner before proceeding to renegotiate price terms downward. It is also worth noting that one of the most significant royalty owners that we are concerned about is the Mineral Management Service of the U.S. Department of Interior.

Contract Hearings, supra note 162, at 88 (statement of Robeart J. Menzie – V.P. and General Manager, Crude Oil and Natural Gas Supply Division of Getty Oil Co.). *See also id.* at 515 (letter from S.C. Mut – Sr. V.P., Arco Oil and Gas Co. to Cong. Phillip Sharp – June 12, 1983).

[197] As the Getty testifier stated in recent congressional hearings:

> My company is a medium-sized producer of natural gas. In round numbers we sell gas under the terms of some 3,000 contracts. Renegotiation of even a small fraction of that number is a large, time-consuming task given the fact that contracts are renegotiated individually. The point is that this is a long-term project which will produce observable results gradually rather than immediately.

Contract Hearing, supra note 162, at 89 (statement of Robert J. Menzie – V.P. and General

restrictions, and take-or-pay relief. The FERC has responded in a mixed fashion to these efforts, while legislative relief has been provided only at the state level by some producing states which have enacted tough consumer protection statutes.

The FERC has rejected arguments that pipelines should be denied the right to pass through costs associated with excessive take-or-pay obligations resulting from past imprudent or reckless gas acquisition activities.[198] Prospectively, the FERC has established limits on take-or-pay obligations in future contracts,[199] suggested that pipelines that do not engage in good-faith efforts to renegotiate their contracts may be denied the right to pass through some of their future gas acquisition costs,[200] and permitted pipelines on a case-by-case basis to grant make-up periods to distributing companies and end-users that have incurred minimum bill deficiencies.[201] Additionally, the FERC has ruled that pipelines should not be permitted to recover variable costs through commodity bills they themselves have not incurred in acquiring gas from their suppliers.[202]

Manager, Crude Oil and Natural Gas Supply Division, Getty Oil Co.).

[198]In 1982, the FERC issued an extremely restrictive definition of the meaning of "fraud, abuse or similar grounds" set forth in section 601(c)(2) of the NGPA. Section 601(c)(2) requires the FERC to allow pipelines to pass through amounts paid for natural gas to the extent they are paid for gas supplies subject to NGPA price controls and are not in excess of applicable price ceilings or are paid for gas supplies decontrolled by the NGPA, unless the prices paid are excessive due to fraud, abuse, or similar grounds. NGPA §§ 601(b)(1)(A), (c)(2), 15 U.S.C. §§ 3431(b)(1)(A), (c)(2) (1983). As promulgated, the FERC fraud standard equated fraud with fraudulent misrepresentation or concealment, abuse with negligent misrepresentation or concealment, and similar grounds with innocent misrepresentation of fact. 18 C.F.R. § 2.300 (1984); Natural Gas; Fraud Standard; Statement of Policy, 47 Fed. Reg. 6,253, 6259-61 (1982). The FERC expressly ruled that the fraud standard was a lesser standard of duty than an imprudency standard. *Id.* at 6258-59, 6262. Later in applying its fraud standard, the FERC held that a pipeline's gas acquisition and cutback policies and practices constitute abuse if they "(i) evidence reckless disregard of the pipeline's fundamental duty to provide service at the lowest reasonable rate consistent with maintenance of adequate service and (ii) have a significant adverse effect on customers or consumers. Columbia Gas Transmission Corp., Opin. No. 204A, 26, F.E.R.C. ¶61, 334, at 61,710 (Mar. 16, 1984). However, in applying the new fraud standard to the Columbia purchasing practices, which the FERC found constituted reckless disregard of Columbia's duties toward ratepayers, the FERC went to great lengths to find that any harm Columbia's ratepayers were experiencing was caused by recessionary conditions and regulatory limitations rather than by Columbia's reckless purchasing practices. *Id.* at 61,710-22.

[199]The FERC take-or-pay policy states in part that:

> (b) with respect to gas purchase contracts entered into on or after December 23, 1983, the Commission intends to apply a rebuttable presumption in general rate cases that prepayments to producers will not be given rate base treatment if the prepayments are made pursuant to take-or-pay requirements in such gas purchase contracts or amendments which exceed 75 percent annual deliverability.

18 C.F.R. § 2.103(b) (1984).

[200]Columbia Gas Transmission Corp., 26 F.E.R.C. ¶ 61,334 at 61,725-25 (1984).

[201]Great Lakes Gas Transmission Co., 15 F.E.R.C. ¶ 61,161 (1981).

[202]18 C.F.R. § 154.111 (1984); *see* Elimination of Variable Costs from Certain Natural Gas Pipeline Minimum Commodity Bill Provisions, Order No. 380, F.E.R.C. Reg. & Stat. ¶ 30,571 (May 25, 1984).

All federal natural gas legislation under current consideration would, if enacted, alter existing contracts as to the operation of their take-or-pay and escalation clauses.[203] Some federal proposals contain statutory market-out clauses and call for price roll-backs.[204] Several producing states have enacted consumer protection legislation limiting the operation of price escalation clauses,[205] or rolling back the prices called for in contracts governing gas supplies which are produced and consumed within their borders.[206] This state legislation has survived constitutional challenges based on due process, equal protection, preemption, and contract clause grounds.[207] However, the constitutionality of consumer state legislation abrogating or limiting the operation of take-or-pay and price escalation

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[203]For example, the natural gas bill which passed the House Energy Committee on April 12, 1984, called for procedure whereby for three years gas purchasers could limit their take-or-pay obligation to 50% of a contract's original take-or-pay quantities in return for the gas seller obtaining a release of the gas volumes involved in the take-or-pay reductions from the sales contract, the Natural Gas Act abandomnent certification process, and the NGPA's first right of refusal limitations. 12 ENERGY USERS REP. (BNA) 335 (April 19, 1984); *id.* at 326 (April 12, 1984). The same bill limits price escalations on gas volumes not deregulated by the NGPA on Jan. 1, 1985, to the rate of inflation, for a period of two years caps price escalators applicable to gas subject to deregulation under the NGPA to the selling prices applicable on the day before deregulation if the gas is sold under contracts that were not renegotiated prior to the deregulation date, and escalates price abragates in contracts subject to NGPA deregulation that are not renegotiated prior to or within two years after deregulation. 12 ENERGY USERS REP. (BNA) 335 (April 19, 1984); *id.* at 327 (April 12, 1984).

By comparison, S. 1715, which was under active consideration in the Senate during much of 1984, would, subject to a gas volumes release mechanism, allow gas purchasers to limit take-or-pay obligations for a period of up to four years after enactment of the bill to 50% of deliverability in the first year, 52.5% in the second year, 55% in the third year, and 60% in the fourth year. Natural Gas Policy Act Amendments of 1983, S. 1715, 98th Cong., 1st Sess. 6,101 (1984). From Jan. 1, 1985, to Jan. 1, 1992, S. 1715 would limit price escalators to the higher of the selling price applicable to the gas in question as of Dec. 31, 1984, or a free market price indicator calculated by taking a weighted average of prices negotiated for deregulated gas supplies during the previous six month period. *Id.* at § 102.

[204]The bill which the Senate Energy Committee sent to the Senate floor without recommendation on July 26, 1983, contained a statutory market-out provision that permitted either party to a gas purchase contract unilaterally to terminate the contract subject to first right of refusal or first right of offer provisions running in favor of the party not exercising the market-out privilege. *See* 11 ENERGY USERS REP. (BNA) 769 (July 28, 1983). In reaction to President Reagan's decontrol proposals, on March 23, 1983, ten senators, including Nancy Kassebaum, from gas-producing Kansas, cosponsored legislation to roll back the prices on NGPA new gas to those in effect on August 1, 1982. 11 ENERGY USERS REP. (BNA) 337 (Mar. 24, 1983). *See also* H.B. 2154, 98th Cong., 1st Sess. (1984).

[205]*See* Oklahoma Natural Gas Price Protection Act, Okla. Stat., tit. 52, §§ 260.1-260.13 (1979), Kansas Natural Gas Price Protection Act, Kan. Stat. Ann. §§ 55-1401 to 55-1455 (1983); New Mexico Natural Gas Pricing Act, N.M. Stat. Ann. §§ 62-7-11 to 62-7-23 (1984).

[206]On March 7, 1984, Governor Anaya of New Mexico signed H.B. 219, which rolls back intrastate prices on intrastate gas produced from wells drilled between 1974-83 to the same levels as are federally applied to gas of the same vintage sold to interstate pipelines. *See* 12 ENERGY USERS REP. (BNA) 251 (Mar .22, 1984).

[207]Energy Reserves Group, Inc. v. Kansas Power & Light Co., 51 U.S.L.W. 4106 (1983).

clauses in contracts governing gas supplies purchased by local consumers is very doubtful.[208]

F. *Free Market Price Caps*

While Congress dawdles, the FERC and the Department of Energy (DOE) have been busy conducting experiments in integrating free market pricing into their price regulation functions. The value of gas service at the burnertip to customers with alternative fuel capability has become the regulatory guidepost, with regulators attempting to discern the level of gas prices that will prevent price-elastic customers from switching fuels or adopting more effective conservation methods.[209] More specifically, regulators have focused on the prices of alternative fuels available to gas end-users to calculate market clearing burnertip prices for gas.[210]

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[208]*See* 11 ENERGY USERS REP. (BNA) 899 (Sept. 15, 1983), reporting that on August 8, 1983, Governor Cuomo of New York vetoed a bill designed to impose by or force of state law restrictions on take-or-pay provisions in gas contracts involving the sale for resale of natural gas in interstate commerce. In his veto message, Gov. Cuomo expressed his opinion that such regulation of natural gas is federally preempted by the provision of the Natural Gas Act and the Natural Gas Policy Act. *Id.*

[209]Value of service pricing focuses on the customer, and what influences its purchasing decisions, rather than on the utility company and its cost structure. Simply put, value of service pricing requires the ratemaker to set rates based on the customer's willingness and ability to pay for a unit of service. What a customer is willing or able to pay is a function of (1) the costs to it of acquiring alternative utility services or employing means to reduce its needs for utility service and (2) the interaction of its cost structure and its income producing characteristics which dictates how much it can afford to pay for utility services. *See* R. PIERCE, G. ALLISON & P. MARTIN, ECONOMIC REGULATION: ENERGY, TRANSPORTATION & UTILITIES 276-307 (1980). Recently, the natural gas industry has been forced to employ value-or-service analysis in its attempts to prevent severe losses of industrial customers to fuel switching, conservation, and recession. Among recent industry actions reflecting its renewed value-of-service consciousness are: (1) designing rates to attract new types of customers such as co-generators and compressed gas using vehicles, 12 ENERGY USERS REP. (BNA) 342 (April 19, 1984); (2) adopting regulatory reforms to encourage flexible transportation arrangements, for end-users, off-systems sales, innovative rate designs, special sales programs, and minimum bill adjustments, 12 ENERGY USERS REP. (BNA) 172 (Mar. 1, 1984); (3) apportioning a greater percentage of fixed costs to demand charges and less fixed costs to commodity charges. *See* Gransee, *Natural Gas Pricing in a Competitive Market: The Emerging Value of Service Standard*, 112 Pub. Util. Fort., Nov. 10, 1983 at 55; (4) interjecting market responsive pricing policies into regulatory standards governing the importation of natural gas. New Policy Guidelines and Delegation Orders from Secretary of Energy to Economic Regulatory Administration and Federal Energy Regulatory Commission Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (1984). [hereinafter cited as Import Std.]

[210]For example, the FERC has proposed limiting price incentives on gas it has deregulated as high cost under its NGPA § 107 authority to a commodity value price based on the price of alternative fuels. Two methods of establishing the commodity values of gas are under consideration. Under one method, a three month average retail price for fuel oil No. 6 will be calculated as a reference price from which will be subtracted average natural gas transportation and distribution costs to impute a wellhead commodity value for high-cost gas. The other method under consideration involves adopting as a reference price a 3 month average BTU equivalent price of crude oil which, when multiplied as a percentage factor estimated to be the ratio of deregulated natural gas wellhead prices to deregulated crude

Once the market clearing burnertip price is determined for price-elastic gas consumers, it can be used to calculate market clearing wellhead prices through net-back pricing. Net-back pricing involves subtracting from the market clearing burnertip price of gas all the costs associated with processing it and transporting it from the wellhead to the burnertip.[211] The remainder is an approximation of the market clearing wellhead price of gas. The net-back pricing calculation can be performed by regulators as a part of their price regulation functions, or by the marketplace through the direct bargaining of producers and end-users. Over the last five years, both the FERC and the DOE increasingly have been engaged in introducing net-back pricing into their price regulation functions or in taking steps to remove obstacles between producers and end-users that may impede their ability to bargain directly.[212]

G. *Circumventing the Pipeline Bottlenecks*

The FERC also has been experimenting tentatively with competitive programs designed to sharpen the market signals between the burnertip and the wellhead. These programs include direct sales between producers and end-users, special marketing programs, and off system sales. To make these competitive programs more flexible and responsive to changing conditions, the FERC has introduced a variety of blanket transportation certificate programs designed to permit the freer flow of gas among geographic areas, pipelines, and distributing companies, and between suppliers and end-users.

(1) Direct Sales

Direct sales between producers and end-users remove pipelines and distribution companies from the marketing chain between the wellhead and the burnertip. Removal of these "middlemen" can be an important step for the gas industry in recapturing lost customers or in acquiring new customers, because in some cases the delivered cost of gas in a direct sale will be below the end-user's costs of either using alternative fuels or acquiring gas from a pipeline or distribution company.[213]

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oil prices, yields an imputed commodity value of high-cost gas. Limitation on Incentive Prices for High-Cost Gas to Commodity Values, 48 Fed. Reg. 7535 (1983). [hereinafter cited as Netback Incentive]. In its recent adoption of new guidelines governing the importation of natural gas, the U.S. Department of Energy has made competitive terms, pricing, and market negotiations the major standard by which gas import arrangements are to be approved. *See* Import Std., *supra* note 209.

[211] *See* Net Back Incentive, *supra* note 210, at 7170-71.

[212] *Supra* notes 209-11.

[213] In its Order No. 319, which liberalized the terms under which certain high priority customers can obtain transportation of natural gas they have purchased directly from producers, the FERC stated:

Direct transactions between producers and end-users quickly and clearly translate market clearing burnertip prices into market clearing wellhead prices, giving producers the information they need to understand what kinds of production programs and costs will enable them to maximize their profits. With this information, producers may be induced to compete more vigorously as to prices than they do when the only sales they make are to pipelines.[214]

To help facilitate direct sales, the FERC has instituted several self-executing blanket transportation programs under its NGA and NGPA transportation authorities.[215] The most advantageous transportation au-

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> A direct sale program can serve a variety of policy objectives. Although these programs were originally designed to be a "stop-gap measure" rather than a permanent palliative to curtailment, the emphasis of the programs has shifted. . . . In the context of present natural gas markets, the primary objective of a direct sale program should be market-ordering. Direct sale arrangements make price competition from competing fuels directly felt in wellhead gas markets and serve to keep wellhead prices responsive to reductions in the burnertip price of alternative fuels.
>
> By providing end users with an alternative to purchasing all their gas requirements from the system supply of a distributor or interstate pipeline, these programs encourage pipelines to adopt gas purchasing practices which keep their delivered prices competitive. In addition, to the extent that an end user consumes gas purchased in a direct sale instead of switching to alternative fuels, the transportation service to the end user continues to bear some of the fixed costs of the transporting pipeline which might otherwise be shifted to the pipeline's remaining customers.

Sales and Transportation by Interstate Pipelines and Distributors: Expansion of Categories of Activities Authorized Under Blanket Certificate, F.E.R.C. Order No. 319, 48 Fed. Reg. 34,875, 34,877 (1983) (to be codified at 18 C.F.R. § 157.207). [hereinafter cited as Order 319.].

[214] *Id.*

[215] In a series of orders in late 1983, the FERC established several self-executing blanket certificate programs to make it less burdensome for end-users to acquire transportation for their own gas supplies. Under Order 319, *supra* note 213, *as modified by* Order 319-A, Interstate Pipeline Blanket Certificates for Routine Transactions and Sales and Transportation by Interstate Pipelines and Distributors, 48 Fed. Reg. 51,436 (1983) [hereinafter cited as Order 319-A], the FERC established blanket certificates permitting high priority end users (defined as consumers acquiring gas for process, feedstock, plant protection, essential agricultural uses or for use in a large commercial establishment, school, hospital, or similar institution) to obtain transportation automatically under a blanket certificate held by an interstate pipeline for a term of:

(1) the lesser of ten years or the life of the reserves for gas produced and developed by the end-user, and
(2) five years or less for gas purchased from instrastate pipelines, the local supplies of local distribution companies, and any first seller of natural gas except interstate pipelines selling their own pipeline production.

Order 319-A, *supra* at 51,437-40.

Under Order 234-B, Interstate Pipeline Blanket Certificates for Routine Transactions and Sales and Transportation by Interstate Pipelines and Distributors, 48 Fed. Reg. 34,872 (1983) (to be codified at 18 C.F.R. 157.209), the FERC created a blanket certification program enabling interstate pipelines to transport automatically gas supplies owned by any end user, including boiler fuel users, for a term up to 120 days. The Order 234-B program is experi-

thorities are directed primarily toward transportation of new gas supplies. Only supplies actually developed by the purchaser are eligible for the ten year self-executing transportation program.[216] Gas supplies dedicated to interstate commerce prior to the enactment of the NEA and offshore gas supplies may not be transported pursuant to the blanket transportation authorities.[217] These limitations give the blanket transportation a decidedly sectionalist flavor. Offshore gas and the gas dedicated to interstate commerce have been contracted for mostly by interstate pipelines.[218] With these gas supplies ineligible for blanket transportation, they are more difficult for intrastate end-users to acquire through direct sales.

(2) Special Marketing Programs

The special marketing programs (SMP) initiated by several pipelines and producers illustrate the case-by-case approach the FERC is taking in authorizing additional direct sales opportunities. Each of these programs serves purposes other than those served by regular direct sales programs. Specifically, these purposes include (1) relieving pipelines and affected distribution companies from take-or-pay and minimum bill liabilities;[219] (2) ensuring that on-system customers ineligible to purchase gas through these programs will not be forced to subsidize eligible SMP customers;[220] and (3) promoting on a step-by-step basis competition at the pipeline and distribution company level for marginal end-users while still protecting the core markets of each pipeline and distribution company.[221]

SMP's are triggered by pipelines, with the consent of their supplying producers, releasing specified volumes of gas committed to them by contract for a brokered direct sale between participating producers and eligible end-users.[222] Producers are required to give pipelines take-or-pay credit for any volumes of their gas that is sold through the SMP.[223] Only cer-

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mental only, and will expire absent FERC renewal on June 30, 1985.

End-user transportation for terms in excess of those prescribed by Orders 319 and 234-B may be acquired under a notice and protest procedure. Order 319-A, *supra* at 51, 437. Moreover, "because it provides the missing link for expeditiously moving end-user owned gas pursuant to blanket certificate authorization, . . . the Commission adopt[ed] the proposed change . . . to allow, on a self-implementing basis, intrastate pipelines transportation . . . incidental to an interstate pipeline's transportation of end-user owned gas under a blanket certificate" pursuant to the NGPA's § 311(a)(2) transportation authority for intrastate pipelines. Order 319, *supra* note 213, at 34,885-86.

[216]Order 319-A, *supra* note 215, at 51,437.

[217]*Id.* at 51,439-40.

[218]*See supra* notes 25-27, 124-29, 158 and accompanying text.

[219]Inquiry on Impact of Special Marketing Programs on Natural Gas Companies and Consumers, 49 Fed. Reg. 3193, 3195 (1984) (to be codified at 18 C.F.R. Ch. 1).

[220]*Id.* at 3195-96.

[221]*Id.*

[222]*See* Columbia Gas Transmission Corp., 25 F.E.R.C. ¶ 61,220 (Nov. 10, 1983), Transcontinental Gas Pipe Line Corp., 25 F.E.R.C. ¶ 61,219 (Nov. 10, 1983).

[223]*Id.*

tain end-users, mainly marginal swing customers, are eligible to purchase SMP gas in order to insulate pipelines' core markets from SMP competition.[224] To ensure that the core customers of participating pipelines are not forced to subsidize the SMP's, pipelines may not release gas supplies purchased at contract prices below the weighted average cost of gas (WACOG) composing their total system supplies.[225]

Taken together, these limitations restrict gas-on-gas competition, and render the SMP's as temporary programs for working off the gas bubble without forcing any dramatic changes in the structure of the gas industry. Presently, the FERC is considering broadening the SMP concept. But for now, the FERC feels that the present SMP's forms permit an orderly deflation of the gas bubble, reduction in take-or-pay liabilities, and evolution toward a more competitive gas market.[226] The FERC also feels that until the SMP experiments proceed further, it will not have enough information to judge whether more intense gas-on-gas competition will be in the public interest.[227]

(3) Off-System Sales

In order to help pipelines make orderly reductions in take obligations that exceed their sales opportunities, the FERC has authorized interstate pipelines to make off-system sales of gas. The purpose of off-system sales is to reduce surplus take obligations of interstate pipelines. To be eligible, a pipeline seller must have (1) enough contracted gas deliverability so that its current on-system customers will not have their service impaired and (2) a potential take-or-pay liability.[228] To keep the selling pipeline's on-system customers from subsidizing the off-system sales and to prevent undue market raiding, the price of gas sold off-system must be the higher of either the selling pipeline's system average load factor rate or its average acquisition cost of gas subject to the NGPA's § 102 price ceiling.[229]

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[224]Eligible end-users include those who in absence of a special marketing program gas sale would be served by:

(1) alternative fuels;
(2) producer direct sales arrangements;
(3) gas made available under an industrial sales programs (sic), or other similar sales programs;
(4) gas sold by pipelines under special discount rates, or in an off-system sale;
(5) propane or synthetic natural gas; or
(6) interruptible sales service schedules.

Transcontinental Gas Pipe Line Corp., 26 F.E.R.C. ¶ 61,340 (Mar. 16, 1984).

[225]Transcontinental Gas Pipe Line Corp. 25 F.E.R.C. ¶ 61,219.

[226]Producer-Suppliers of Transco Gas Supply Co., 26 F.E.R.C. ¶ 61,029, at 61,056 (Jan. 16, 1984).

[227]*Id.*; *Supra* note 219.

[228]Off-System Sales: Statement of Policy, 23 F.E.R.C. ¶ 61,140, at 61,307. (April 25, 1983).

[229]*Id.* However, since the promulgation of this off-system sales pricing policy, the FERC has permitted off-system sales at prices below the pricing standards in its policy statements

Further market raiding protection is provided by the FERC's policy of conducting case-by-case approval hearings when market raiding allegations are raised.[230] Off-system sales authorities are granted on a one year basis simply to give the FERC periodic opportunities to review their usefulness.[231]

The FERC's off-system sales policies have strong sectionalist implications. For the most part, the bulk of the volumes sold off-system has been sold to the gas markets of Louisiana and California.[232] More recently, the Louisiana market has been the most important absorber of off-system gas.[233] Given the sectionalist pricing and allocation policies of the NEA, intrastate pipelines have higher WACOG's and lesser access to new supplies and historic lower priced supplies than do many interstate pipelines.[234] Intrastate pipelines are therefore the most likely targets of market raiding

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where a pipeline demonstrated that the lower rate will permit off-system sales to be made that will provide net benefits to on-system customers by

(1) reducing take-or-pay costs,
(2) contributing an adequate share to the coverage of the pipeline's fixed costs, and
(3) insuring that the pipeline's system average cost of gas will not increase as the pipeline purchases gas to replace the volumes sold off-system.

Natural Gas Co. of America, 27 F.E.R.C. ¶ 61,235 (May 11, 1984); Natural Gas of America Co., 26 F.E.R.C. ¶ 63,042 (Jan. 26, 1984) (Initial Decision of ALJ Lotis).

[230] *Supra* note 228, at 61,308.

[231] *Id.*

[232] *Id.* at 61,306.

[233] *Id.*

[234] *See id.* at 61,306-08; *Id.* at 61,309-10 (Chairman Butler concurring); Review of Off-System Sales Program, 47 Fed. Reg. 37,664-65 (FERC Aug. 26, 1983). *See also* notes 25-27, 124-29, 158 and accompanying text. *But see supra* note 228, at 61,312-23 (concurring opinion of Commissioner Richard wherein it is argued that interstate pipelines with high gas acquisition costs are in as bad a posture as complaining intrastate pipelines). Finally, there is Commissioner Sheldon's dissenting opinion to FERC's off-system policy statement wherein she articulated a decidedly different view of the reasons for the intrastate pipelines' current anxiety with the following observations:

> From the onset of interstate curtailments in 1971 to as recently as two years ago, certain intrastate pipelines have enjoyed significant supply advantages to the detriment of the interstate market. A major ingredient which spawned the intrastate surplus was the absence of any price control. However, this absence of controls enabled intrastate supplies to offer firm service to intrastate industrial and boiler fuel markets. Moreover, countless industrial customers of interstate pipelines faced with the option of no gas willingly relocated their plants to the gas rich intrastate arena. Further, immediately upon passage of NGPA, these same intrastate pipelines, who today the majority seeks to insulate from the rigors of the marketplace, capitalized considerably under sections 311(b) and 312 of the NGPA. Enormous volumes of surplus intrastate gas moved into the gas-starved interstate market without a mention of market raiding or anticompetitiveness.
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> . . . Off-system sales are only a temporary and short-term response to the myriad factors which have caused the current deliverability surplus. To deny appropriate market responses for parochial reasons is a policy I cannot support. Further, to suggest that the cushion is a creature of the statute flies in the face of the history of contractual and regulatory practices in the intrastate market. It has been next to impossible for intrastates to acquire low-cost gas on a permanent basis since virtually every intrastate contract contains favored-nations clauses which

off-system sales. Since interstate pipelines participating in SMPs and off-system sales do not have to release permanently any of their committed reserves,[235] as the gas bubble deflates, intrastate pipelines and end-users in their service areas are the most likely to face future deliverability shortages.[236] It is therefore not surprising that intrastate pipelines have been the most persistent critics of the FERC's off-system sales policies.[237]

VII. The Spot Market Debate

All these pipeline, producer, distributor, end-user and FERC interactions have produced a more complete fusion of the intrastate and interstate markets and a greater acceptance of market-determined prices as regulatory and contractual price ceilings. At least in the short run, some producers, pipelines, distributors and end-users have been induced to supplant the security of long-term contractual arrangements with short-term spot market transactions. For now, pipelines are increasing the percentage in their total operations represented by transportation service. In fact, the current advantages of spot-markets and increased transportation availability are causing large industrial users who are incapable of fuel-switching to assert regulatory and political pressures. These users want the natural gas industry restructured to enable most gas to be sold in spot markets at prices determined by direct negotiations between producers and end-users.[238]

> cause all intrastate prices to rise according to the highest price which any intrastate buyer is willing to pay. Interstates today might be facing the same prospect had not the Commission explicitly acted to prohibit the operation of these clauses in interstate contracts.

Id. at 61,309-2 to 61,309-3.

[235]*See* Columbia Gas Transmission Corp., 25 F.E.R.C. ¶ 61,220, at 61,566 (Nov. 10, 1983) (ordering paragraph Q) for the limited term abandonment authorization characteristic of special marketing programs. Off-system sales involve no release of gas. Rather, each off-system sale is "a sale of natural gas that is excess to the pipeline's current demand, that is of a short-term, interruptible nature, and that is made to a customer outside or away from the pipeline's traditional or historic market area." *Supra* note 228, at 61,305.

[236]*Supra* notes 157-58 and accompanying text.

[237]*Id., supra* note 234. Besides intrastate pipelines, small producers have also been critical of the FERC's off-system sales policies. *See Gas Issues II, supra* note 159, at 543, 545 (Statement of Danny H. Conklin-Chair, Natural Gas Committee, Independent Petroleum Association of America).

[238]For example, the Process Gas Consumers Group has been very critical of the FERC's attempts to protect the core markets of pipelines from the special market program sales of others. In response to the FERC's concern that such gas-on-gas competition will cause increased take-or-pay woes and cost shifting among customers, the PGC alleged that:

> (1) "there is no evidence that cost shifting will occur;"
> (2) if cost shifting does occur, "the Commission can simply adjust the allowed return on equity for pipelines that attempt to shift greater share of costs to a contracting market if the prices charged are not competitive;"

A. *Oil Price Stability*

Whether the recent industry and regulatory experimentation with competition will lead to an industry dominated by spot markets will depend on the development of sectoral and sectional consenses that a competitive natural gas policy can well serve public and individual interests. The key factor in the development of the consensus is continued price stability in world oil markets. The real drops in the price of oil since 1981 have narrowed the gap between oil and natural gas prices, established the interfuel competition that is currently disciplining end-user energy prices, and in contrast with the performance of the natural market, provided an example of how competitive pricing policies can produce better results than regulatory pricing policies. If world oil prices remain relatively stable through 1985, the potential fly-up in natural gas prices may not occur, because the real price of oil may be close to that which was predicted for 1985 by the authors of the NEA.[239]

B. *Continuing Deregulation*

Assuming oil prices remain stable, the next important factor in the development of natural gas spot markets is whether the market distortions produced by federal natural gas policies and traditional industry contracting practices have been or will be moderated enough so that the electorate will allow the deregulation of natural gas wellhead prices to continue. For the foreseeable future it appears that pipelines are unlikely to make bids for new gas supplies at prices above market clearing levels. Many interstate pipelines have lost their ability to make supracompetitive bids

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(3) "take-or-pay liability will not necessarily be exacerbated by a less restricted program;"

(4) "if it is, the Commission does not have to permit these costs to be borne by ratepayers;" and

(5) wholesale competition among pipelines "is ineffective since pipelines do not compete vigorously with one another. If they did, one would not expect the price rigidity and rate increases that are readily observable."

Tenneco Oil Co., 26 FERC ¶ 61,030, at 61,068 (Jan. 16, 1984). *See* 12 ENERGY USERS REP. (BNA) 144 (Feb. 23, 1984); 11 ENERGY USERS REP. (BNA) 641 (June 23, 1983).

[239]In the opinion of the National Economic Research Associates (NERA):

> [T]here should be no upward pressure on the real prices of petroleum products during the remainder of this decade, and at most a modest tendency for real prices to increase during the 1990's. This stability in the price of the dominant energy commodity will mean, in turn, a constraint on the tendency for the real price of other fuels to increase.

12 ENERGY USERS REP. (BNA) 172 (Mar. 1, 1984).

The current OPEC benchmark price is $29.00 per barrel. That price is under extreme competitive pressure resulting from price reductions by Great Britain, Norway, and Nigeria. A price drop to $24.00 is likely, and steeper declines to $15-$20 are not impossible. Martin, *The Troubling Economics of Oil*, N.Y. Times, Oct. 28, 1984 at F1, col. #2.

because their previous supracompetitive bids have overwhelmed the price moderating effects of their low cost gas inventories, and as a consequence, their burnertip prices are no longer competitive.[240] This compacting of the interstate gas cushion has, in combination with intrastate legislation that restricts the operation of indefinite price escalators and rolls back the prices of some intrastate gas contracts, narrowed the discrepancy in gas inventory values between interstate and intrastate pipelines. With the variances in gas inventory values reduced, the ability of interstate pipelines to bid-away gas supplies from intrastate pipelines has been reduced.[241] Therefore, the market and political pressures to equalize the prices of all gas supplies by eliminating vintaged pricing and deregulating all wellhead prices have diminished.

Reducing supracompetitive burnertip prices in areas served by pipelines that have lost their historic gas cushions is a continuing regulatory and political priority. Efforts to reduce high burnertip prices have focused on the securing of price roll-backs and take-or-pay relief through legislation, administrative decision, and regulation. Except within some gas producing states, legislation has had little or no impact on this problem.[242] Regulators have established standards that should prevent such inflexibility from occurring in future gas contracts.[243] Renegotiation is therefore the key to reducing burnertip rates. The experimental direct sales and SMP's authorized by the FERC have provided incentives and mechanisms for pro-

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[240]*See* Tussing and Barlow, *A Survival Strategy for Gas Companies in the Post-OPEC Era*, 111 Pub. Util. Fort., Feb. 3, 1983, at 13, 14.

[241]*See supra* notes 161, 205, 206.

[242]*Supra* note 183; *see supra* notes 161-82 and accompanying text. In fact, one commentator, Irene S. Wischer, President of the Panhandle Producing Co., offered the opinion that the approval of a price recontrol bill by the House Energy Committee "is forcing independent producers to try to hold their prices high right now because of the threat that it might become the base price for years to come." 12 ENERGY USERS REP. (BNA) 407 (May 10, 1984).

[243]The FERC has taken several actions designed to help order the market in a way that reduces the gas bubble and brings down the price of natural gas at the burnertip. The major steps the FERC has taken include:

(1) Attempting to formulate a workable off-system sales policy, *supra* notes 228-37;
(2) Authorizing special marketing programs, *supra* notes 219-27;
(3) Developing more flexible transportation programs in aid of direct sales between end-users and producers, and between end-users and pipelines and distribution companies with excess gas supplies, *supra* notes 213-17;
(4) Experimenting with commodity value pricing and net-back pricing, *see supra* notes 209-10.
(5) Proposing more flexible procedures for enabling pipelines to quickly reflect in their rates to end-users rapid changes in purchase gas acquisition costs resulting from a partially deregulated market. Revisions to the PGA Regulations: Notice of Inquiry, 49 Fed. Reg. 18,539 (1984).
(6) Issuing rules forbidding pipelines from recovering any variable costs associated with gas not taken by the buyer through minimum commodity bills. Elimination of Variable Costs from Certain Natural Gas Pipeline Minimum Commodity Bill Provisions, 49 Fed. Reg. 22,778 (1984).

ducers and pipelines to renegotiate their contracts as to prices and take-or-pay obligations.[244] At this time, it appears that the momentum for wellhead price reregulation and legislative contract abrogation is being blunted by renegotiation efforts and by the growing awareness that supracompetitive burnertip prices are being experienced by only a few pipelines.[245] The phased deregulation of gas prices pursuant to the NEA's gas policies should continue unabated, at least for this year.

C. *Freer Gas Supplies*

Spot markets also require the availability of substantial supplies of gas free from contract commitment. Most flowing gas is sold under long-term contracts.[246] Historic gas supplies sold in interstate commerce are also subject to the NGA's abandonment procedures.[247] Acquiring an abandonment certificate to release gas committed to interstate commerce is often a difficult, if not impossible task.[248] The FERC's SMP programs are securing temporary short-term releases of gas from contractual and regulatory commitments.[249] Market-out clauses in long-term contracts are also providing a method of releasing gas to the open market.[250]

These release mechanisms may not be effective in securing uncommitted gas supplies for a spot market once pipelines have brought their take-or-pay obligations and their sales opportunities into equilibrium. The FERC is not requiring pipelines to release the reserves backing the wells they have shut-in to reduce their deliverability surpluses;[251] nor is the FERC requiring pipelines to release the gas reserves that are the sources of the SMP gas volumes. Rather, the FERC is granting pipelines participating in SMPs the right to release specified volumes while retaining the long-term contractual and regulatory commitments of the underlying reserves.[252] Moreover, although the average contract term has shortened over the last decade,[253] given the storage and transportation difficulties associated with

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[244]*Supra* notes 213, 219-27 and accompanying text.

[245]*See* 12 Energy Users Rep. (BNA) 246 (Mar. 22, 1984).

[246]A 1982 DOE Report showed that as of 1980, gas contracts with duration terms of 20 or more years comprised 85.8% of pre-1973 contracts, 54.8% of 1973-April 20, 1977 contracts, and 63.9% of April 21, 1977-Nov. 8, 1978 contracts. U.S. Dept. of Energy, Natural Gas Producer/Purchaser Contracts and Their Potential Impacts on the Natural Gas Market: An Analysis of the Natural Gas Policy Act and Several Alternatives, Pt. II 43 (June, 1982) [hereinafter cited as DOE Contract Analysis].

[247]*Supra* note 158.

[248]*Id.*

[249]*Supra* note 222.

[250]DOE NGPA Report, *supra* note 138, at 5-2 to 5-3.

[251]*Supra* note 158.

[252]Tenneco Oil Co., 25 FERC ¶ 61,234, at 61,607 (Nov. 10, 1983).

[253]For example, gas contracts with duration terms of 20 years or more comprise only 28.3% of producer/purchaser contracts entered into between Nov. 19, 1978 and 1980, and only

natural gas as compared with crude oil, producers and pipelines still prefer bulk sales of gas under long-term contracts.[254] Thus, for the present it appears that important sectors of the natural gas industry do not yet believe competitive markets can provide the supply and financial security they require. This opposition threatens to block legislation that will provide for releases of gas reserves whenever pipelines cannot honor their take-or-pay obligations. Producers and end-users in producing states are the chief advocates of this legislation. Pipelines and end-users in the interstate markets, still worried about future shortages, have thus far managed to block it.[255]

D. *Flexible Transportation*

Readily available flexible transportation is also a prerequisite to the creation of spot markets. Large industrial gas users that lack the ability to use alternative fuels are seeking to break down institutional barriers which

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7.3% of producer/purchaser contracts entered into in 1980. DOE Contract Analysis, *supra* note 246, at 43.

[254]*See* Simes, *A Spot Market for Natural Gas*, 113 Pub. Util. Fort., Feb. 16, 1984, at 24, 26, wherein he quotes the chairman of Panhandle Eastern (Richard L. O'Shields) as stating in a recent talk that: "overlooked is the valuable service provided the market by pipelines in assembling large volumes of gas from diverse sources, resulting in favorable price terms, long-term supply strength, and protection against supply failure from any single source."

[255]A summary of the interstate market's resistance to legislative gas release mechanisms is contained in A Critique of Legislation on Natural Gas Adopted by the House Energy Subcommittee on Fossil and Synthetic Fuels on July 29, 1983, wherein, it was stated that under the Act:

> The option a producer has, under several provisions . . . to sell supplies to a new purchaser if the gas is not taken by the current purchaser, even if never exercised, could create considerable confusion at a time when the industry is already hard-pressed to deal with changes in gas markets. The [Act] could create a potential for real damage to the supply situation for some interstate pipelines, in particular those pipelines which now have contracts for significant supplies of high-cost gas and low-cost "old gas" which they have not been taking because of reduced demand. . . .
>
> Due to the potential damage in a pipeline's long-term supply outlook, the producer's option to sell gas to a new buyer in several situations would give producers significant leverage vis-a-vis the current pipeline purchaser.
>
> For example, if a pipeline wanted to continue to buy gas from an old well, the producer would have considerable leverage on the pipeline's decision whether or not to purchase any "enhanced" or extra gas at a decontrolled price. Most experts agree it is virtually impossible to distinguish the volumes which would be "enhanced" versus those which would be produced anyway; therefore, the pipeline might want to continue buying all gas production from the well to assure that none of its "old gas" was sold to a new purchaser under the guise of being "enhanced gas." Or, a producer might tie negotiations on other deals to a pipeline's agreement to purchase the "enhanced" gas at a decontrolled price.
>
> The option provided pipelines to reduce take-or-pay obligations to 50% appears to be a choice between Scylla and Charbydis: if a pipeline chooses to reduce take-or-pay obligations to 50%, it must risk permanently losing the gas supply represented by the extent of the contract obligation in excess of 50% . . . If

block the provision of bulk transportation by natural gas pipelines. These users are sponsoring legislation that would require pipelines to perform mandatory contract carriage.[256] At the present time, pipelines are resisting mandatory contract carriage legislation with arguments that contract carriage (1) will be inappropriate for the transportation of a product that cannot be effectively and economically stored,[257] (2) will inflict additional regulatory and operating complexities on pipelines that are already having difficulty meeting end-user supply and service needs in a competitive end-user market,[258] and (3) will inherently favor large users to the detriment of small users since only they will be able to replicate economically the gas acquisition and load balancing functions pipelines now perform.[259]

Conversely, large industrial end-users that have been denied the benefits of the SMPs feel there is more supply and pricing security to be found in spot markets.[260] These end-users can point to pipeline refusals to carry direct sales gas supplies that could be competitive with system supplies for the business of pipeline core customers as examples of pipeline abuse of transportation leverage. They argue that abuses such as these warrant correction through contract carriage legislation.[261]

The major gas policy proposals pending before Congress contain contract carrier provisions.[262] However, these provisions basically attempt to integrate contract carriage functions with the pipelines' gas sales functions rather than to convert pipelines into mere transporters.[263] Given the radical changes more extensive contract carriage would impose on the natural gas industry, an industry already awash in a sea of changing con-

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the cost of short-term price relief is a long-term supply problem, a pipeline may well opt not to make use of this tool.

11 ENERGY USERS REP. (BNA) 811 (Aug. 11, 1983).

[256]*See* 12 ENERGY USERS REP. (BNA) 494 (June 7, 1984); 12 ENERGY USERS REP. (BNA) 462 (May 31,. 1984); 11 ENERGY USERS REP. (BNA) 763 (July 28, 1983).

[257]*See* Mogel & Gregg, *Appropriateness of Imposing Common Carrier Status on Interstate Natural Gas Pipelines*, 4 Energy L. J. 155, 182-83 (1983).

[258]See 12 ENERGY USERS REP. (BNA) 463 (May 31, 1984); 12 ENERGY USERS REP. (BNA) 47-8 (Jan. 19, 1984).

[259]*Id.*; *see also* 11 ENERGY USERS REP. (BNA) 763 (July 28, 1983); 11 ENERGY USERS REP. (BNA) 459 (May 5, 1983).

[260]*Supra* note 238. *See also* 12 ENERGY USERS REP. (BNA) at 142-44 (Feb. 23, 1984); 12 ENERGY USERS REP. (BNA) 494 (June 7, 1983); 11 ENERGY USERS REP. (BNA) 641 (June 23, 1983); 10 ENERGY USERS REP. (BNA) 1103-04 (Nov. 4, 1982).

[261]*See* 11 ENERGY USERS REP. (BNA) 779 (Aug. 4, 1983). *See* ANR Pipeline Co., 26 F.E.R.C. ¶ 61,170 (Feb. 10, 1984) (Pipeline transportation rates for end-user transportation found to be unjust, unreasonable, and unduly discriminatory); Columbia Gas Transmission Corp., 26 FERC ¶ 61,169 (Feb. 10, 1984) (The FERC found that end-user groups raised enough serious questions regarding availability of end-user transportation services to warrant setting an oral argument to deal with such questions).

[262]*Supra* note 257, at 176-79.

[263]*Id.* at 181. *See also* 12 ENERGY USERS REP. (BNA) 283 (April 15, 1984); 11 ENERGY USERS REP. (BNA) 773 (Aug. 4, 1983).

ditions, it is highly problematic that pipelines will soon be required to perform transportation functions exclusively.

For now, the changes in natural gas policies and practices required to establish the spot market as the dominant vehicle by which gas is sold are increasingly unlikely to occur. While the current experimentation in the creation of spot markets is producing promising results, ironically, it is also providing escape valves for the dissipation of pressures to make fundamental changes in the nation's natural gas industry.

VIII. Conclusion

Structural changes in the nation's economy, demographics and natural gas industry should reduce sectionalistic strife over natural gas policies in the future. First, the legislative power of producer interests is declining. Since the *Phillips* decision, the natural gas delivery network has reached maturity. Very few areas remain that lack adequate gas service and have realistic chances of obtaining gas service under any set of natural gas policies. The number of net consuming states have grown with the expansion of the gas delivery network and the depletion of historic gas fields. Conversely, the number of net producing states has fallen. Moreover, the dual gas markets preceding the NEA provided net producing states in the old intrastate markets with the resources to expand their gas consuming sectors. That expansion was so dramatic that the remaining net producing states are the nation's leading consumers of natural gas. Recently, the net producing states have seen their gas consuming sectors increase in economic importance relative to their gas producing sectors. As their gas consuming sectors increase in importance, the legislative perspectives of the net producing states have become more consumer oriented.

Second, over the last forty-six years the nation's natural gas industry has experienced virtually every kind of industry-government relationship except outright government take-over. This varied history has produced valuable lessons both consumer interests and producer interests can accept. As long as world oil markets remain stable, there is a common acceptance that supply and demand imbalances can be avoided if gas burner-tip prices and wellhead prices are set by reference to market clearing prices, as established by the market for alternative fuels, rather than by costs of production. There is also a consensus that natural gas policies must promote a fully integrated national natural gas delivery system instead of causing a fragmentation of the nation into separate gas markets.

Finally, there seems to have developed a resolve within producing states and net consuming states that concepts of perfection should not be allowed to destroy the workable. No amount of regulatory tinkering has produced perfection. Just the opposite resulted from the imposition of more

rigid forms of regulation. Workable solutions to the gas shortages of the seventies and to the gas bubble of the eighties have a common theme: market-oriented pricing and a more integrated gas transportation network. Just as the regulatory experimentation with market-oriented solutions during the seventies gave rise to a congressional willingness to experiment with a phased deregulation, the FERC's current experimentation with even more market-oriented solutions to the gas bubble seems to be producing a congressional willingness to allow its deregulation experiment to continue, subject only to possible corrective actions to insure that current regulatory and structural barriers to the setting of wellhead prices by reference to consumer opportunity costs are removed. Thus, the decline of the producing interests' congressional power need not lead to more regulation in the name of consumerism.

The demise of sectionalism does not mean that the natural gas industry will be exceptionally peaceful in the future or that controversial debates over natural gas policies will not continue in Congress. Within each state, conflicts are occurring among consumer interests as to how government should respond to the competitive pressures now engulfing the natural gas industry. Large industrial users advocate more deregulation. Small end-users, especially those with low incomes, wish to restrain the increase in competition in fear that they will be left to the mercy of higher prices and lower service reliability as captured consumers of pipelines and distributors unable to cope with a competitive environment. Pipelines support deregulation at the wellhead, but resist attempts to subject them to more competitive discipline and ask for aid in avoiding losses they have incurred for misjudging the strength of interfuel competition. Large producers with diversified production interests are willing to accept temporary reductions in prices and take-or-pay reform in order to bring about a more stable market which can provide better production opportunities in the future. Small independents who invested heavily in high cost gas developments lack the financial leverage with which to renegotiate, and thus they are bitterly resisting any regulatory or legislative changes that could deprive them of the value of their contracts to sell high cost gas.

Natural gas controversies will continue. But they will be resolved in a different manner. The demise of sectionalism will make it harder for proponents to line up the entire congressional delegation of a single state or section because of its identification as a net producing or net consuming area. Changes in natural gas policies may occur, but if they do, they will be the results of congressional representatives making decisions based on what policies best serve the sectoral interests most important to the areas they represent. The fact that a congressional representative is from a net producing or a net consuming area is less likely to pre-dispose him to vote for more competition or more regulation than it has been in the

past, for the history of U.S. natural gas regulation has clearly demonstrated the economic interdependence of the nation's gas producing and gas consuming sectors.

All this suggests that natural gas policy debates are losing their sectionalists theme and assuming a sectoral tone. Yet, the tenacious hold interstate pipelines have on gas reserves dedicated to interstate commerce prior to the enactment of the NEA, the bulk of the new gas commitments made after the NEA's enactment, and offshore gas reserves could trigger another sectionalist debate over natural gas allocation policies. Current attempts by the FERC to encourage the orderly deflation of the gas bubble in a way that avoids the creation of intrastate gas shortages have only papered over the underlying imbalances in the commitments of future gas deliverability. Most gas still flows pursuant to long-term contract commitments and legislative interstate commerce dedications. The intrastate gas sales which interstate pipelines have been willing to make and which the FERC has been willing to authorize involve temporary release of natural gas pursuant to programs designed to reduce interstate pipelines' take-or-pay liabilities. As a consequence, intrastate markets, which consume the largest volumes of natural gas, have less claims on future natural gas deliverability than do markets served permanently by interstate pipelines.

If domestic gas reserves backing current consumption levels deplete at a faster rate than natural gas consumers can offset by finding acceptable energy alternatives, the intrastate markets will experience dislocating shortages sooner than the rest of the nation. Intrastate gas shortages could give rise to political pressures from traditional gas producing states calling for a nationwide gas rationing program that would allocate natural gas on the basis of need rather than on private contractual commitments and private market transactions. Conversely, those served by interstate pipelines will resist both the expansion of their supplying pipelines' service areas and the involuntary allocation of interstate pipeline gas supplies to intrastate gas consumers.

If a natural gas rationing program develops from a new sectionalist gas allocation debate, further damage will be done to the sanctity of the contract ideal, and wellhead price controls could be reimposed. Wellhead price control pressures would be difficult to resist if alternative energy prices rise significantly as natural gas reserves deplete. Such events could return the nation to the natural gas policies that prevailed prior to the passage of the NEA. Should this occur it would seem that once again rational natural gas policy making was defeated by sectionalist passion.

However, sectionalist passion is usually the result of state coalitions correctly perceiving that their rational self-interests cannot be furthered by current national policies. It is the genius of our constitutional system that has fused together the world's greatest free trade union while preserving

the opportunity for each state to insist that its legitimate concerns must not be crushed by the weight of purely majoritarian politics. The opportunity of minority coalitions to assert effectively their concerns requires the nation to examine critically its corporate goals before overriding minority interests and provides the nation with the competition of ideas that is the catalyst of orderly change. Sectionalist debate, in which all sides exercise their constitutional tools within the confines of our legal system, reacquaints the sections of our country with their economic interdependence and reminds individuals of their common needs resulting from the human condition. Natural gas sectionalism is a dramatic case study of a nation achieving neither perfect efficiency nor perfect equity, but through the debate, maintaining a workable political economy.